DOCUMENT RESUME

ED 134 607 95 TM 006 013

AUTHOR Klopp, Pamela M.
TITLE The Wisconsin Design for Reading Skill Development: Comprehension. A Report on the 1973-74 Small-Scale Field Test. Technical Report No. 373.
INSTITUTION Wisconsin Univ., Madison. Research and Development Center for Cognitive Learning.
SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C.
PUB DATE Jun 76
CONTRACT NE-C-00-3-0065
NOTE 128p.

EDRS PRICE MF-$0.83 HC-$7.35 Plus Postage.
DESCRIPTORS Comparative Analysis; Educational Objectives; *Elementary Education; *Evaluation Methods; *Field Studies; Reading Achievement; *Reading Comprehension; Reading Instruction; *Reading Programs; *Reading Skills; Skill Development
IDENTIFIERS Wisconsin Design for Reading Skill Development

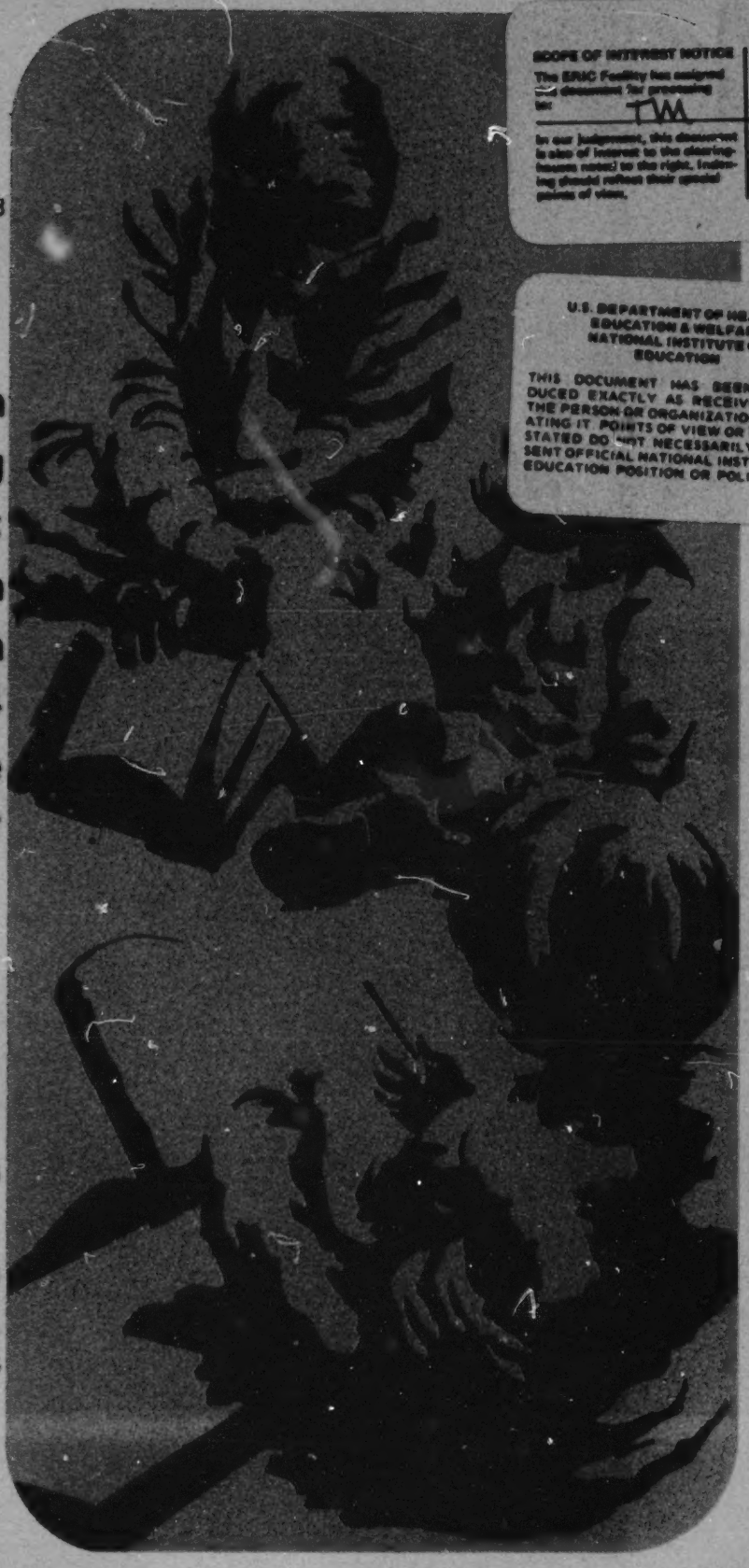
ABSTRACT

This report describes the evaluation plan for the 1973-74 small-scale field test of the Comprehension element of the Wisconsin Design for Reading Skill Development and presents results for the eight field test objectives investigated. These objectives, the first three grouped under the rubric product usability and the next five grouped under product effectiveness, are: (1) to learn whether the teacher's resource files, Teacher's Planning Guide, and Center-sponsored inservice provided sufficient information for field test faculties to implement the product according to the requisites for effective implementation; (2) to learn whether the field test faculties considered the product a viable program; (3) to identify specific errors, omissions, and confusions in the product's components; (4) to compare on the product's objectives the mastery levels of the implementation group versus the preimplementation group; (5) to compare on standardized tests related to Comprehension the scores of the implementation group versus the preimplementation group; (6) to determine whether implementation groups increased their achievement level on standardized tests related to Comprehension more than would be expected; (7) to ascertain the percentage of learners mastering the product's objectives at an 80 percent level immediately after instruction in those skills; and (8) to ascertain learner retention rates on the product's objectives with an eight-week intermission between skill mastery and retesting. (RC)

Documents acquired by ERIC include many informal unpublished materials not available from other sources. ERIC makes every effort to obtain the best copy available. Nevertheless, items of marginal reproducibility are often encountered and this affects the quality of the microfiche and hardcopy reproductions ERIC makes available via the ERIC Document Reproduction Service (EDRS). EDRS is not responsible for the quality of the original document. Reproductions supplied by EDRS are the best that can be made from the original.

TECHNICAL REPORT NO. 373

the wisconsin design for reading skill development: comprehension a report on the 1973-74 small-scale field test



SCOPE OF INTEREST NOTICE
The ERIC Facility has assigned this document for processing to
TM CS
In our judgement, this document is also of interest to the clearinghouses noted to the right. Indexing should reflect their special points of view.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

JUNE 1976

WISCONSIN RESEARCH AND DEVELOPMENT CENTER FOR COGNITIVE LEARNING

TM006 013

Technical Report No. 373

THE WISCONSIN DESIGN FOR READING SKILL DEVELOPMENT: COMPREHENSION A REPORT ON THE 1973-74 SMALL-SCALE FIELD TEST

by

Pamela M. Klopp

Report from the
Technical Services Section

Wisconsin Research and Development
Center for Cognitive Learning
The University of Wisconsin
Madison, Wisconsin

June 1976

Published by the Wisconsin Research and Development Center for Cognitive Learning, supported in part as a research and development center by funds from the National Institute of Education, Department of Health, Education, and Welfare. The opinions expressed herein do not necessarily reflect the position or policy of the National Institute of Education and no official endorsement by that agency should be inferred.

Center Contract No. NE-C-00-3-0065

WISCONSIN RESEARCH AND DEVELOPMENT CENTER FOR COGNITIVE LEARNING

MISSION

The mission of the Wisconsin Research and Development Center for Cognitive Learning is to help learners develop as rapidly and effectively as possible their potential as human beings and as contributing members of society. The R&D Center is striving to fulfill this goal by

- conducting research to discover more about how children learn
- developing improved instructional strategies, processes and materials for school administrators, teachers, and children, and
- offering assistance to educators and citizens which will help transfer the outcomes of research and development into practice

PROGRAM

The activities of the Wisconsin R&D Center are organized around one unifying theme, Individually Guided Education.

FUNDING

The Wisconsin R&D Center is supported with funds from the National Institute of Education; the Bureau of Education for the Handicapped, U.S. Office of Education; and the University of Wisconsin.

ACKNOWLEDGMENTS

The WDRSD: Comprehension 1973-74 small-scale field test was a major effort and required a considerable expenditure of time and energy by the field test participants. I am indebted to the principals and staff at the following schools for their assistance in carrying out the ambitious field test plan: Columbus Elementary and McKinley Elementary, Appleton, WI; Locust Lane Elementary, Eau Claire, WI; Whitney Elementary, Green Bay, WI; Victor Haen Elementary, Kaukauna, WI; McFarland Elementary and Conrad Elvehjem Middle School, McFarland, WI; Green Bay Avenue School and Philipp School, Milwaukee, WI; Oregon Elementary and Oregon Middle School, Oregon, WI; and Fairmount Elementary, Golden, CO.

School district central office personnel aided in coordinating Center efforts with the field test schools. For their facilitating efforts I wish to thank: Ellie Eggener of Joint School District #10, Appleton; Vivian Landauer of Eau Claire Area Public Schools; Helen Ferslev of Green Bay Public Schools; Doris Cummins of Milwaukee Public Schools; and Miriam Hall, George Jurata, and Sigurd Lewison of Jefferson County, Colorado, Public Schools.

Appreciation is also extended to the Center staff members who contributed to the report's preparation. Jean Romaniuk conducted a seemingly endless number of data analyses. Karlyn Kamm, Conrad Katzenmeyer, Ellen Murdoch, and Wayne Otto provided constructive comments in serving as reviewers.

TABLE OF CONTENTS

		Page
	Acknowledgments	iv
	List of Tables	vii
	Abstract	ix
I.	The Product	1
	Overview	1
	Objectives for the Comprehension Element	5
	Components	6
	Requisites for Effective Implementation	7
	Prior Product Evaluation	8
II.	Field Test Plan	11
	Objectives	11
	Participants	12
	Activities	14
	Instrumentation and Method	16
III.	Evaluation of Product Usability	27
	Objective 1: Product Implementation	27
	Objective 2: Product Feasibility	36
	Objective 3: Product Deficiencies	40
IV.	Evaluation of Product Effectiveness	41
	Objective 4: Comparative Performance--Program-embedded Tests	42
	Objective 5: Comparative Performance--Standardized Reading Achievement Tests	47
	Objective 6: Comparative Performance of Individual Learners--Standardized Reading Achievement Tests	50
	Objective 7: Percent Masters after Skill Instruction	51
	Objective 8: Skill Retention	57
	Summary	62

TABLE OF CONTENTS (cont.)

	Page
References	65
Appendices	
Appendix A: Statement of Skills and Objectives for the Wisconsin Design for Reading Skill Development: Comprehension 1973-74 Small-Scale Field Test	67
Appendix B: Schools Participating in the Wisconsin Design for Reading Skill Development: Comprehension 1973-74 Small-Scale Field Test.	73
Appendix C: Field Test Memorandum of Agreement	75
Appendix D: Agenda for Comprehension Field Test Inservice	79
Appendix E. Second Visit Interview Guide: Principal or Reading Specialist, and Unit Leader or Teacher . .	81
Appendix F: Third Visit Interview Guide: Principal or Reading Specialist, and Unit Leader or Teacher . .	89
Appendix G: Fourth Visit Interview Guide: Principal or Reading Specialist, and Unit Leader or Teacher . .	101
Appendix H: Comprehension Comment Card	107
Appendix I: Postassessment Following Instruction Form .	109

LIST OF TABLES

Table		Page
1	Design Skills by Area and by Traditional Grade Level . .	2
2	Matrix of Comprehension Skill Numbers by Strand and Level	6
3	Distribution of Field Test Sites	13
4	Agenda of Field Test Events	15
5	Break-in Testing Summary for Schools Where Reading Achievement is Typically At or Above Grade Level (Site Type A)	17
6	Break-in Testing Summary for Schools Where Reading Achievement is Typically Below Grade Level (Site Type B)	18
7	Instrumentation for the Field Test Objectives	19
8	Data Collection Schedule for the Field Test Objectives .	20
9	Program-Embedded Tests Used for Comparative Performance According to Site Type and Grade Level	22
10	Standardized Reading Achievement Tests Used for Comparative Performance According to Site Type and Grade Level	24
11	Attainment of Requisites for Effective Implementation .	28
12	Average Number of Minutes Per Week Interviewees Using Formal Implementation Pattern Spent on Comprehension Skill Instruction According to Regrouping Frequencies .	33
13	Principal/Reading Specialist Ratings of Staff Reactions to WDRSD: Comprehension	37
14	Third Monitoring Visit Interviewees' Degree of Agreement with Statements about WDRSD: Comprehension	38

LIST OF TABLES (cont.)

Table		Page
15	Comparative Performance on Program-Embedded Tests of Students in Schools with Typical Reading Achievement At or Above Grade Level (Site Type A) . . .	43
16	Comparative Performance on Program-Embedded Tests of Students in Schools with Typical Reading Achievement Below Grade Level (Site Type B)	45
17	Comparative Performance on Standardized Reading Achievement Tests of Students in Schools with Typical Reading Achievement At or Above Grade Level (Site Type A)	48
18	Comparative Performance on Standardized Reading Achievement Tests of Students in Schools with Typical Reading Achievement Below Grade Level (Site Type B)	49
19	Distribution of Grade Equivalent Changes of Students Administered the CTBS Reading Comprehension Subtest in Both 1973 and 1974	52
20	Percent Masters After Skill Instruction in Schools with Typical Reading Achievement At or Above Grade Level (Site Type A)	53
21	Percent Masters After Skill Instruction in a School with Typical Reading Achievement Below Grade Level (Site Type B)	55
22	Retention of Skills Mastered at Break-in and After Instruction in Schools with Typical Reading Achievement At or Above Grade Level (Site Type A)	58
23	Retention of Skills Mastered at Break-in and After Instruction in Schools with Typical Reading Achievement Below Grade Level (Site Type B)	60

ABSTRACT

This report describes the evaluation plan for the 1973-74 small-scale field test of the Comprehension element of the Wisconsin Design for Reading Skill Development and presents results for the eight field test objectives investigated.

The field test was conducted in ten elementary (K-6) schools, nine in Wisconsin and one in Colorado. Eight of the schools were located in small-city and suburban areas where reading achievement is typically at or above grade level (site type A), while the remaining two were urban schools where reading achievement is typically below grade level (site type B). Site differences also included school organization, whether multiunit or conventional, and the number of Design elements being implemented at that time.

Field test objectives 1 to 3 pertained to product usability; results, on the whole, were positive:

1. Product implementation--attainment of the ten developer-stated requisites for effective implementation was generally satisfactory in the site type A schools for all requisites and in the site type B schools for eight of the requisites.
2. Product feasibility--school staffs of both site types considered the product a viable program for elementary schools.
3. Product deficiencies--school staff members identified errors, omissions, and confusions in the product's materials.

Objectives 4 to 8 were concerned with product effectiveness. Measurement employed both program-embedded and standardized tests. The evaluation design for objectives 4 and 5 utilized a cross-sectional comparison of the performance of learners of the same age/grade level in the field test sites in different academic years--immediately prior to product installation (Fall 1973, preimplementation group) and near the end of the first year of implementation (Fall 1974, implementation group). Each age/grade level preimplementation group served as the control for the group of learners at the same age/grade level one year later. Longitudinal comparisons were also made with the standardized measures.

Results for objectives 4 to 8 are reported according to site type:

4. Cross-sectional comparative performance--program-embedded tests--comparisons were positive for 22 of the 28 Design objectives assessed in the site type A schools and for 21 of the 29 objectives assessed in the site type B schools.

5. Cross-sectional comparative performance--standardized reading achievement tests--gains in raw score means occurred at all grade levels tested in the site type A schools and at four of five grade levels tested in the site B schools.

6. Longitudinal comparative performance of individual students--standardized reading achievement tests--across three grade level comparisons for the site type A schools, 15.4% of the students experienced a loss in grade equivalent, 5.4% experienced no change in grade equivalent scores, 27.9% a gain from a month to a year, and 51.3% a gain of 1.1 or better. Across two grade level comparisons for the site type B schools, 23.2% of the students experienced a loss in grade equivalent, 7.2% experienced no change in grade equivalent scores, 33.3% a gain from a month to a year, and 36.2% a gain of 1.1 or better.

7. Percent masters after skill instruction--the grand total percent masters across all of the Design Comprehension skills was 71.9% for the site type A schools and 60.3% for the site type B schools.

8. Skill retention--the overall retention rate for skills mastered at break-in testing or after instruction was 85.3% for the site type A schools and 77.2% for the site type B schools.

I

THE PRODUCT

OVERVIEW

The Wisconsin Design for Reading Skill Development (Design) is an objective-based system that provides both structure and substance for an elementary school reading program, kindergarten through grade six. The Design provides the basis for a skill-oriented approach to the teaching of reading and is based on the assumption that if learners master essential subskills, they will be successful readers. The four major Design components are (1) skills and objectives; (2) assessment materials; (3) instructional resources; and (4) management techniques and materials.

Skills and Objectives

The structure of the Design is provided by its Outline of Reading Skills (Otto & Askov, 1974), a scope and sequence description of what the developers believe to be essential reading skills for the elementary school. The skills are grouped into six main areas: Word Attack, Comprehension, Study Skills, Self-Directed Reading, Interpretive Reading, and Creative Reading. Each area is subdivided into levels that correspond roughly to grade levels as shown in Table 1.

An instructional objective has been developed for each skill--45 objectives for Word Attack, 36 for Comprehension, 71 for Study Skills, 15 for Self-Directed Reading, 18 for Interpretive Reading, and 14 for Creative Reading. Two types of instructional objectives have been developed for the six Design skill areas. There are behavioral, or prescriptive, objectives for the Word Attack, Comprehension, and Study Skills areas; and there are expressive, or descriptive, objectives for the Self-Directed, Interpretive, and Creative Reading areas. A prescriptive objective specifies what a child is to do to attain mastery of the skill; it is written at a mid-level of specificity and assumes an 80% criterion for mastery. The expressive objectives are quite different in that they are mainly descriptions of activities that are judged to be relevant to the development of skills in the Self-Directed, Interpretive, and Creative Reading areas. Expressive objectives permit focus on the important aspects of reading instruction for which there are intended, yet unassessable, results.

A terminal objective has been stated for the Word Attack, Comprehension, and Study Skills elements (see the respective teacher's planning

TABLE 1

DESIGN SKILLS BY AREA AND BY TRADITIONAL GRADE LEVEL

Skill Area	K	1	2	3	4	5	6
Word Attack	A	B	C	D	-	-	-
Comprehension	A	B	C	D	E	F	G
Study Skills	A	B	C	D	E	F	G
Self-Directed Reading	⟵ A-C ⟶			D-E		F-G	
Interpretive Reading	⟵ A-C ⟶			D-E		F-G	
Creative Reading	⟵ A-C ⟶			D-E		F-G	

guides for the terminal objectives of Word Attack and Study Skills). The terminal objective states the student outcome expectations once all of the instructional objectives have been mastered.

Assessment Materials

Criterion-referenced assessment materials have been developed to assess the behavioral objectives in the Word Attack, Comprehension, and Study Skills areas. There is a test to assess each objective. The Wisconsin Tests of Reading Skill Development (WTRSD) and performance tests comprise the formal assessment component. The WTRSD are paper-and-pencil tests which can be group administered and scored either by hand or by computer. They are available in two parallel forms and in either hand-scorable, single-sheet format (for a single objective) or machine-scorable, booklet format (for all the objectives at a given level). Typically, the booklets are used for break-in testing to find the students' initial instructional levels, and the single-sheet tests are used after skill instruction to assess individual attainment of criterion performance. Performance tests, developed for the behavioral objectives that cannot be assessed by written means, are individually administered and require oral and/or motor responses. Manuals for test administrators are a part of the assessment materials.

Informal assessment exercises, called Guides to Informal Individual Skill Observation (Otto & Askov, 1974), are also available for the Word Attack skills. The guides provide directions for observing learner behavior. They are criterion-referenced in the same sense that the

WTRSD and the performance tests are; they are designed to sample criterion behaviors that are prescribed by objectives. In practice, these guides serve as supplements to the formal tests. Where the formal tests bring objectivity and reliability to the assessment process, the informal guides offer flexibility and, in some instances, a different way to observe a skill.

In the Self-Directed, Interpretive, and Creative Reading areas there are no criterion-referenced assessment materials. Instead, teachers are urged to plan systematic exposure of each learner to all of the skills and related activities over relatively long time periods and to observe and judge performance in view of the general descriptive statement. Since mastery, per se, is not the goal, the evaluative task involves informal observations upon what has been produced as the learner is exposed to a skill.

Instructional Resources

Because a vast array of commercially-published materials is already available for teaching most of the essential skills, the Design includes a component called the teacher's resource file, which is a means for organizing existing materials and activities. There is a teacher's resource file for each skill area which has behavioral objectives--Word Attack, Comprehension, and Study Skills. Within each file, materials and activities are identified and organized by objective. On the inside of each file folder are printed the behavioral objective for a particular skill and a list of commercially-published printed, audiovisual, and multimedia materials that are useful in teaching the skill. The commercial materials listed represent only a limited sampling of the vast array of materials available. Teacher-directed activities are provided as inserts to each folder and are intended as guides in planning skill instruction. Thus, in each file there is a collection of materials and activities appropriate for teaching the criterion behavior(s) prescribed by each objective. The collection is viewed as a "starter set" to which teachers are expected to add whatever local resources they judge to be relevant to the objectives and to the needs of their pupils.

There is a single teacher's resource file for the Self-Directed, Interpretive, and Creative Reading areas. Its organization is similar to that of the files for the other areas, with a specific folder for each skill strand at each level. The main difference is that the material related to each skill is organized to provide breadth of exposure rather than mastery of prescribed criterion behavior. The teacher's task in Self-Directed, Interpretive, and Creative Reading is to give learners opportunities to develop the skills through situations in which they bring to bear personal meanings and express their individuality.

Management Techniques and Materials

Three components of the Design are directed specifically at providing assistance with its management and implementation. The Rationale and Guidelines (Otto & Askov, 1974), which describes all six skill areas of the Design, provides a rationale for the development of the Design

and guidelines for its implementation. There are separate teacher's planning guides for Word Attack, for Comprehension, and for Study Skills, and one guide for Self-Directed, Interpretive, and Creative Reading. The planning guides include the specific information teachers need to implement an objective-based approach to each skill area. Taken together, the Rationale and Guidelines and the teacher's planning guides provide the practical assistance that will enable a school staff to plan and carry out the assessment, grouping, scheduling, and record keeping that is required for successful implementation.

A final management component is the profile card. Profile cards are provided in Word Attack, Comprehension, and Study Skills for keeping a current record of each individual learner's skill development status. On the Comprehension profile card, for example, all of the Design Comprehension skills are listed by level; a corresponding hole by each skill is notched open when the learner achieves mastery of that skill. When current, the profile card shows which behavioral objectives a learner has and has not attained at a given time. The one record card for Self-Directed, Interpretive, and Creative Reading is designed for recording the number of exposures a learner has had to each of the descriptive objectives.

In summary, the Design, with its four major components--skills and objectives, assessment materials, instructional resources, and management techniques and materials--is a model for focused reading instruction. The Design is conceptualized to identify essential skills, specify these skills with objectives, assess learners' skill development, organize instructional materials and procedures, manage instruction, and monitor learners' progress. The Rationale and Guidelines (Otto & Askov, 1974) should be consulted for a complete description of the program.

The Design has been under development since 1967; during this period it has undergone revisions based upon information gathered from content and measurement experts, teachers, evaluators, and several field tryouts. A large-scale field tryout of the Word Attack element was conducted in 1970-72, and of the Study Skills element in 1971-73. A pilot test of the Self-Directed, Interpretive, and Creative Reading elements occurred in 1972-73. All elements except Comprehension are now available in commercial edition.

The Design provides a framework for an effective skill development program in reading, and this framework is compatible with the program of the Wisconsin Research and Development Center for Cognitive Learning, Individually Guided Education (IGE). IGE is a comprehensive alternative form of schooling. Built from research findings and actual tryouts in school settings, IGE provides an educational experience for each child which takes into account what he already knows, how rapidly he learns, and how he goes about learning. To help schools achieve this goal, IGE provides for changes in the total educational system.

The Instructional Programing Model (IPM), perhaps the most crucial element of IGE, helps schools focus on individual needs. The IPM provides a framework for setting educational objectives; selecting a range of specific instructional objectives; assessing learners' performance; setting objectives for each learner; planning and implementing instruction via activities, materials and media, and time, space, and equipment; and reassessing learners' attainment of objectives. The prin-

ciples of the IPM are embodied in the Design. Implementation of IGE through use of the Design involves assessing each learner's skill development, grouping learners who need to develop the same skill or configuration of skills, providing individual assistance as necessary within each group to take into account differences in rate and style of learning, providing for independent activity or study, reassessing, and regrouping as some learners develop the configuration of skills, or part of them, and others do not. The four major components of the Design, previously described, facilitate implementation of the Instructional Programing Model element of IGE.

OBJECTIVES FOR THE COMPREHENSION ELEMENT

Thirty-six Comprehension skills were identified after a careful survey of the professional literature, assessment and instructional materials, and standardized tests in the area of Comprehension. Two basic assumptions distinguish the Design's model of Comprehension from other models. First, the developers found it necessary to distinguish between skills requiring convergent thinking and those requiring divergent thinking. The Design Comprehension model deals only with those skills which require convergent thinking, i.e., there are right and wrong answers. Skills that encourage divergent thinking are appropriately placed in the Design's Interpretive and Creative Reading areas where the descriptive objectives allow more latitude in responses. Divergent thinking offers no right or wrong answers; it involves questions which have answers that are open to interpretation.

The second distinction between the Design model and that offered in traditional materials occurs in the treatment of inferential thinking. Many programs offer a skill commonly referred to as "Inferential Thinking." The developers, however, found that inferential thinking cuts across all skills and levels. In the Design, therefore, inferential skills are not treated independently but are embodied in separate skills, e.g., inferring the main idea, inferring an outcome, etc.

Specific Objectives

The Comprehension objectives are organized by strand and by level. Each strand includes related skills which recur at higher levels with more complex behavior expected at each successive level. The skill levels correspond generally to the grade levels shown in Table 1. There are six strands and seven levels. The matrix of skills for each strand and level is shown in Table 2. Some of the strands have more than one skill at a particular level. For example, there are two reasoning skills at each of Levels A, F, and G. Also, there is not always a skill for each strand at each level. For example, there are no Detail skills at Levels A and G; Context skills occur only at Levels D, E, and G. The levels are arranged in sequence. Within a level, however, there is no hierarchy of skills. The skill number designations shown in Table 2 are

TABLE 2

MATRIX OF COMPREHENSION SKILL NUMBERS
BY STRAND AND LEVEL

Strand	Level A	B	C	D	E	F	G
Main Idea	1	1	1	1	1	1	-
Sequence	2	2	2	2	2	2	1
Reasoning	3 4	3	3	3	3	3 4	2 3
Detail	-	4	4 5	4 5	4	5	-
Context	-	-	-	6	5	-	4
Affixes	-	-	-	-	6	6	5

for reference purposes only; they are a convenience for school personnel since teachers usually deal with skills within one level at a time. Information in some of the later tables and text refers to the skills by level and number rather than by strand and skill name.

The "Statement of Skills and Objectives for Comprehension," small-scale field test edition, is presented in Appendix A. Chapter 2 of the Comprehension teacher's planning guide (Chester, Askov, Hudson, & Otto, 1974) gives a complete description of the skills and their organization for the large-scale field test edition, which is not substantially different from the small-scale field test edition.

COMPONENTS

The following materials, which are described in the Overview, were available for use during the field test:

Wisconsin Tests of Reading Skill Development: Comprehension
- Machine-scorable booklet edition, Levels A-D, Form I
- Hand-scorable separate edition, Levels A-D, Forms I and II
- Reusable booklet edition, Levels E-G, Forms I and II
- Machine-scorable answer sheets, Levels E-G, Forms I and II

Hand-scorable answer sheets, Levels E-G, Forms I and II
Test Administrator's Manuals, Levels A-G
Teacher's Resource File: Comprehension, Levels A-G
Teacher's Planning Guide: Comprehension
Profile cards: Comprehension

REQUISITES FOR EFFECTIVE IMPLEMENTATION

Certain conditions were considered by the developers to be necessary for effective implementation. Ten requirements for installation and implementation were stated for the field test participants. Requisites 1 to 3 pertain to product installation, while requisites 4 to 10 pertain to the instructional, assessment, and management aspects of implementation.

1. Local representatives of the field test schools must attend a one-day Center-sponsored inservice to acquire information regarding implementation of the product.
2. Within one month following the Center inservice, local school representatives must conduct inservice sessions for local faculties to provide information and support for implementing the product. The agenda for the sessions should include a description of the product, strategies for scheduling instruction, and opportunities for keying local materials to the product's behavioral objectives.
3. Initial break-in testing must be conducted to identify initial instructional levels for learners in grades one to six (including kindergarten second semester). Retesting must be conducted within three weeks at a higher or lower level for learners who were tested at an inappropriate break-in level. New learners must receive break-in testing within one month after entering school.
4. The local faculty must demonstrate a commitment to the Comprehension element that ensures that every learner receives instruction appropriate to his skill deficiencies.
5. Instructional skill groups must be formed on the basis of assessment information.
6. Instruction must be provided that is related to the skill deficiencies of the instructional groups. Two hours per week of skill instruction is the minimum time requirement.
7. Learners must be postassessed following instruction in order to ascertain their mastery level.
8. Learners must be regrouped in a manner that is consistent with their current skill needs.
9. Profile cards must be kept up-to-date and in a fashion that ensures their utility in instructional decisions.
10. New skill groups must be formed at a rate that ensures completion of at least one level per grade in a school year throughout the field test period.

PRIOR PRODUCT EVALUATION

A pilot test of the product was conducted during the spring semester of the 1972-73 school year for Levels A-C and during the fall semester of the 1973-74 school year for Levels D-G. Three Wisconsin schools were identified as pilot test participants. Two of the schools, one located in a rural community and the other in a small city, were multi-unit in organization. The third, an inner-city school, was conventionally organized. All three were experienced Design users, each having implemented the Word Attack element for a minimum of two years; two of the schools had implemented the Study Skills element as well.

Both prior to and during the pilot test, the Comprehension assessment component underwent several stages of evaluation. Since the instruments are criterion-referenced, test specifications followed from the Comprehension behavioral objectives with which the tests were to be used. The behavioral objectives themselves had been reviewed by experts in the fields of reading and measurement. Written, group administerable tests were developed for 35 of the 36 behavioral objectives; parallel forms were developed for each test. The remaining objective was more appropriately assessed by an individually administered performance test that did not involve written responses. The tests were evaluated by content and measurement experts in terms of assessment of objectives, appropriateness of item format, clarity of item intent, appropriateness for audience, clarity of test directions, appropriateness of assessment time, and acceptability of test statistics.

Test development proceeded in accordance with the evaluation questions just specified and consisted of at least six steps. Each step included a developmental phase and a review phase. The steps were (1) development of test specifications and sample items, (2) writing of sufficient items to yield one test form, (3) pilot administration of those items to a small group of learners, (4) formal administration of revised items to a number of learners large enough to gather item data, (5) assembly of a test administrator's manual, and (6) use of the instrument under normal conditions by a number of schools or classes. Step 3 was conducted, not in the pilot schools, but in a school close to Madison and the Center. Step 4 was conducted in the three pilot schools and in a number of other schools as well because a large number of students and a great deal of time were required for the tryouts. Step 6 was a pilot school activity.

The pilot test included field test activities in addition to the assessment tryouts just described. Two Center-sponsored inservices (one for Levels A-C and the other for Levels D-G) provided an initial tryout of inservice materials developed specifically for the Comprehension element. Revisions in the inservice materials were made on the basis of teacher feedback. The assessment and management materials and instructional resources needed for implementation were used in the tryout edition. Periodic monitoring visits to the pilot schools were made by Center staff members to examine problems involving product implementation and to answer questions regarding materials and procedures. Formative data gathered through staff interviews, questionnaires, and pilot school meetings identified problem areas.

In summary, prior product evaluation activities included expert review of the skills and objectives, evaluation-embedded development and tryout of the criterion-referenced tests, and a pilot test during which formative data were collected regarding usability of the component materials.

II

FIELD TEST PLAN

OBJECTIVES

The 1973-74 small-scale field test was designed to gather product usability information and product effectiveness information from learner behaviors. The data obtained were utilized in making revisions for the developmental edition for the 1974-76 large-scale field test. The data also identified areas needing further product refinement in preparation for the commercial edition. The field test objectives, grouped under product usability and product effectiveness, follow:

Product Usability

1. To learn whether the teacher's resource files, Teacher's Planning Guide, and Center-sponsored inservice provided sufficient information for field test faculties to implement the product according to the requisites for effective implementation. (Product implementation)

2. To learn whether the field test faculties considered the product a viable program for elementary schools. (Product feasibility)

3. To identify specific errors, omissions, and confusions in the product's components. (Product deficiencies)

Product Effectiveness

4. To compare on the product's objectives the mastery levels of the implementation group versus the preimplementation group. (Comparative performance--program-embedded tests)

5. To compare on standardized tests related to Comprehension the scores of the implementation group versus the preimplementation group. (Comparative Performance--standardized reading achievement tests)

6. To determine whether implementation groups increased their achievement level on standardized tests related to Comprehension more than would be expected (more than 1.0 years). (Comparative performance of individual learners--standardized reading achievement tests)

7. To ascertain the percentage of learners mastering the product's objectives at an 80% level immediately after instruction in those skills. (Percent masters after skill instruction)

8. To ascertain learner retention rates on the product's objectives with an eight-week intermission between skill mastery and retesting. (Skill retention)

Evaluation of field test objective 1 provides usability information in relation to implementation, which in turn has implications for the evaluation of product effectiveness. The usability information pertains to the sufficiency of the component materials to yield practices that are in accord with the developer's requisites for effective implementation. The data then obtained with respect to implementation practices provide the context for evaluation of the effectiveness data. Product effectiveness, therefore, must be viewed in relation to the degree of product implementation.

Objectives 4, 7, and 8 pertain to effectiveness of the product's specific objectives. While Objective 4 is a direct effectiveness measure, 7 and 8 were investigated to acquire information about skill mastery and retention rates, information not collected during prior Design field tests, but of interest to both consumers and the professional audience. Attainment of the product's terminal objective was left unexamined because it was not expected that learners would attain mastery of all the product's objectives by the end of the small-scale field test.

Cost information was not collected because the Center, rather than a commercial vendor, produced and distributed the product's component materials for the small-scale field test.

PARTICIPANTS

Ten elementary (K-6) schools, nine in Wisconsin and one in Colorado, participated in the small-scale field test. An attempt was made to include schools serving populations with varying achievement and socioeconomic characteristics, including inner-city urban schools and suburban and small-city schools. A second variable of interest was the school's organization, whether multiunit or conventionally organized into self-contained classrooms. A third variable of interest was the number of Design elements being implemented by the school. Distribution of the field test sites with reference to these variables is summarized in Table 3. Although Table 3 shows a total of 11 schools, only 10 were formal field test participants. The additional school (site type A, which had a multiunit organization, and was implementing Word Attack and Study Skills in addition to Comprehension) was included in the evaluation-related testing program (objectives 4 to 6), but its implementation of the product was not monitored. Sufficient information was known about its implementation practices, however, to include its data in the analyses for objectives 4 to 6.

TABLE 3

DISTRIBUTION OF FIELD TEST SITES

Reading Achievement	School Organization: MULTIUNIT Design Elements[a] WA[b]	MULTIUNIT Design Elements[a] WA, SS[b]	CONVENTIONAL Design Elements[a] WA[b]	CONVENTIONAL Design Elements[a] WA, SS[b]	Total
Site Type A: Typically at or above grade level (suburban, small-city)	3	5	--	1	9
Site Type B: Typically below grade level (urban)	--	--	1	1	2
Total	3	5	1	2	11

[a] In addition to Comprehension

[b] WA = Word Attack; SS = Study Skills

As is shown in Table 3, two schools were in an urban area where reading achievement is typically below grade level, and nine were in small-city and suburban areas where reading achievement is typically at or above grade level. Two-thirds of the schools were multiunit in organization; inclusion of an urban multiunit school was not possible at the time of the field test. All schools had been implementing the Design's Word Attack element for two to three years prior to beginning Comprehension implementation and more than half were also implementing the Study Skills element.

The following method was used to identify the sites. A prerequisite requirement for participation in the field test was prior implementation of the Design Word Attack element. The developer's recommendation for installation and sequence is that implementation generally begins with assessment and teaching of the Word Attack skills since they are basic to all other reading skills.

The Design's Word Attack and Study Skills small-scale field tests had created a pool of 22 schools from which to choose, and all of the schools in this pool were asked if they wished to participate in the Comprehension field test. Because of budgeting considerations, the districts with more than one school in the previous Design field tests

were informed that only one or two schools from the district could participate. Schools were then selected for the categories shown in Table 3. A factor in the selection process was a school's quality of commitment during the previous field tests. Two of the final ten schools selected had not participated in the prior field tests. The two were multiunit site type A schools, and they were implementing Word Attack, but not Study Skills. Two other schools in the final selection, one site type A and multiunit, the other a site type B and conventionally organized, were asked to discontinue Study Skills implementation during the period of the Comprehension small-scale field test. Schools from the pool not selected were permitted to purchase the component materials from the Center at a cost of $.60 per student, attend the Center-sponsored inservice, and implement the product independently of the field test. A list of the field test schools and their characteristics is presented in Appendix B.

The field test schools signed a formal agreement with the Center (Appendix C) in which they expressed a commitment to meet the field test requirements and in which the Center enumerated the contributed resources.

ACTIVITIES

The major field test activities, as illustrated in Table 4, included inservice, assessment, skill instruction, and monitoring of product installation and implementation. The events and schedule were communicated to the sites at the outset of the field test. The development and tryouts of materials had not been completed for all of Levels A to G by the start of the field test. Therefore, the break-in and baseline testing activities and the start of skill instruction were scheduled by skill level clusters. The criterion-referenced tests and teacher's resource files needed for these activities were available for Levels A to D in September 1973, for Levels E and F in November 1973, and for Level G in January 1974. The product's other component materials, the teacher's planning guide and the pupil profile card, were available to the schools at the beginning of the field test.

Activities for monitoring product installation and implementation and for baseline and comparison data collection will be described in the instrumentation and method section for field test objectives 1 to 3 and 4 to 6 respectively.

Inservice

A Center-sponsored one-day inservice meeting was held in September 1973 in Madison to acquaint the field test schools with the product. Central office personnel from the participating districts were invited to attend, and each field test school was permitted to send three staff members to the training session with the expectation that the attendees would then conduct their own local Comprehension inservice. The Center inservice agenda included sessions on the Comprehension strands, sche-

TABLE 4

AGENDA OF FIELD TEST EVENTS

Dates	Field Test Events
	Inservice:
September 1973	Center-sponsored
October 1973	Local
	Assessment:
	Break-in testing to determine learners' instructional levels
September 1973	Levels A-D
November 1973	Levels E-F
	Baseline data collection on preimplementation group for grade levels
September 1973	1-3 site type A; 1-4 site type B
November 1973	4-6 site type A; 5-6 site type B
	Comparison data collection on implementation group for grade levels
September 1974	1-3 site type A; 1-4 site type B
November 1974	4-6 site type A; 5-6 site type B
	Skill instruction:
October 1973	Commences for Levels A-D
January 1974	Commences for Levels E-G
September 1974	Continues for Levels A-G
	Monitoring of product installation and implementation:
October, November 1973; January, March, May, October 1974	Total of four visits to each site

duling for skill instruction, and field test expectations. The complete agenda appears in Appendix D. Attendees were provided a packet of materials that could be used in their local inservice. The packet included descriptive information about each of the six Comprehension skill strands, the field test's objectives and schedule of activities, and the requisites for effective implementation.

Assessment: Break-in Testing

Break-in tests were administered to students in the field test schools to identify learners' initial skill instructional levels and to diagnose their skill proficiencies and deficiencies. This placement testing is a prerequisite activity for the formation of instructional skill groups. Test administration of the booklet editions for break-in testing was managed by the field test faculties, and scoring services were provided by the Center. Tables 5 and 6 present the break-in testing summaries for the schools according to their typical reading achievement, whether at or above grade level (site type A), or below grade level (site type B). Retesting up or down a skill level is required when learners master either all or none of the skills at the

level first tested. The test level information presented in Tables 5 and 6 is for initial break-in testing only. Final placement information after all retesting had been completed was not obtained. The boxed data show the results of the Center's recommendations with respect to the break-in level to be administered at each grade level.

The initial break-in test level administered was accurate for 74.2% of the site type A learners across all grade and skill levels. Of the grand total of learners who required retesting, 53.6% needed to be retested up a level and 46.4% down a level. The total retesting percentages by grade level for the site type A learners were Grade 1, 28.2%; Grade 2, 26.8%; Grade 3, 35.3%; Grade 4, 35.0%; Grade 5, 19.5%; and Grade 6, 11.6% for a grand total retest percent of 25.8.

Substantially more retesting was required in the site type B than in the site type A schools. The initial break-in test level was accurate for just 65.6% of the site type B learners across all grade and skill levels. Of the grand total of learners who required retesting, most (89.1%) needed to be retested down a level while only 10.9% needed to be retested up a level. The total retesting percentages by grade level for the site type B learners were Grade 1, 7.4%; Grade 2, 44.8%; Grade 3, 33.3%; Grade 4, 44.6%; Grade 5, 36.7%; and Grade 6, 41.2% for a grand total retest percent of 34.4.

Skill Instruction

The dates for beginning skill instruction were scheduled to allow sufficient time for the retesting activity just described. If events were on schedule, the field test term permitted an implementation period of nine months for the primary levels (Grades 1-3) and eight months for the intermediate levels (Grades 4-6) before comparison data were collected for the implementation groups. Descriptive information about the skill instructional aspect of implementation is presented in Chapter III in the evaluation of field test objective 1, product implementation.

INSTRUMENTATION AND METHOD

The instrumentation and the data collection schedule for the field test objectives are summarized in Tables 7 and 8. Discussion will now focus on the individual objectives.

Product Usability

Objective 1: Product implementation. One measure of product usability concerned whether the materials would yield implementation practices in accord with the developer's plan. A necessary first step was to determine whether the field test faculties were able to meet the requisites for effective implementation. The primary sources for descriptive information on product implementation were the interview guides administered during monitoring visits to the schools by Center personnel. The interview guides (Appendices E, F, and G), were constructed primarily to obtain information specifically about the requisites for effective implementation.

TABLE 5

BREAK-IN TESTING SUMMARY FOR SCHOOLS WHERE READING ACHIEVEMENT IS TYPICALLY AT OR ABOVE GRADE LEVEL (SITE TYPE A)*

		Test Level Administered											
Test Level	Grade	A		B		C		D		E		F	
Placement	Level	N	%	N	%	N	%	N	%	N	%	N	%
Accurate	1	473	71.8			1	100.0						
Test Up		186	28.2			0	0.0						
Test Down		-	-			0	0.0						
Total Retest		186	28.2			0	0.0						
Total N		659				1							
Accurate	2	18	51.4	458	74.2	4	100.0						
Test Up		17	48.6	62	10.0	0	0.0						
Test Down		-	-	97	15.7	0	0.0						
Total Retest		17	48.6	159	25.7	0	0.0						
Total N		35		617		4							
Accurate	3			97	82.2	334	60.9	2	66.7				
Test Up				8	6.7	125	22.8	1	33.3				
Test Down				13	11.0	89	16.2	0	0.0				
Total Retest				21	17.7	214	39.0	1	33.3				
Total N				118		548		3					
Accurate	4			6	85.7	79	61.2	359	65.4	4	100.0		
Test Up				1	14.3	4	3.1	144	26.2	0	0.0		
Test Down				0	0.0	46	35.7	46	8.4	0	0.0		
Total Retest				1	14.3	50	38.8	190	34.6	0	0.0		
Total N				7		129		549		4			
Accurate	5					3	60.0	47	56.0	500	83.2	29	100.0
Test Up						0	0.0	18	21.4	1	.2	0	0.0
Test Down						2	40.0	19	22.6	100	16.6	0	0.0
Total Retest						2	40.0	37	44.0	101	16.8	0	0.0
Total N						5		84		601		29	
Accurate	6							5	41.7	77	86.5	555	89.5
Test Up								1	8.3	1	1.1	1	.2
Test Down								6	50.0	11	12.4	64	10.3
Total Retest								7	58.3	12	13.5	65	10.5
Total N								12		89		620	

*N = 9 schools

TABLE 6

BREAK-IN TESTING SUMMARY FOR SCHOOLS WHERE READING ACHIEVEMENT IS TYPICALLY BELOW GRADE LEVEL (SITE TYPE B)*

Test Level Placement	Grade Level	Test Level Administered A N	A %	B N	B %	C N	C %	D N	D %	E N	E %
Accurate	1	151	92.6								
Test Up		12	7.4								
Test Down		-	-								
Total Retest		12	7.4								
Total N		163									
Acurate	2	20	95.2	54	47.8						
Test Up		1	4.8	0	0.0						
Test Down		-	-	59	52.2						
Total Retest		1	4.8	59	52.2						
Total N		21		113							
Accurate	3			83	62.4	35	79.5				
Test Up				4	3.0	1	2.3				
Test Down				46	34.6	8	18.2				
Total Retest				50	37.6	9	20.5				
Total N				133		44					
Accurate	4			12	46.2	65	56.0	10	62.5	1	100.0
Test Up				0	0.0	7	6.0	2	12.5	0	0.0
Test Down				14	53.8	44	37.9	4	25.0	0	0.0
Total Retest				14	53.8	51	43.9	6	37.5	0	0.0
Total N				26		116		16		1	
Accurate	5			3	75.0	67	63.2	25	62.5		
Test Up				0	0.0	0	0.0	6	15.0		
Test Down				1	25.0	39	36.8	9	22.5		
Total Retest				1	25.0	39	36.8	15	37.5		
Total N				4		106		40			
Accurate	6					4	36.4	59	59.6	41	61.2
Test Up						0	0.0	3	3.0	0	0.0
Test Down						7	63.6	37	37.4	26	38.8
Total Retest						7	63.6	40	40.4	26	38.8
Total N						11		99		67	

*N = 2 schools

TABLE 7

INSTRUMENTATION FOR THE FIELD TEST OBJECTIVES

Field Test Objectives	Instrumentation
Product Usability	
1. Implementation	Second Visit Interview Guides: Principal or Reading Specialist, and Unit Leader or Teacher (Appendix E) Third Visit Interview Guides: Principal or Reading Specialist, and Unit Leader or Teacher (Appendix F) Fourth Visit Interview Guides: Principal or Reading Specialist, and Unit Leader or Teacher (Appendix G)
2. Feasibility	Same as for (1)
3. Deficiencies	Comment Cards (Appendix H)
Product Effectiveness	
4. Comparative performance--program-embedded tests	Wisconsin Tests of Reading Skill Development: Comprehension subtests
5. Comparative performance--standardized reading achievement tests	Listening and Reading subtests of the Cooperative Primary Tests (1965); Reading Comprehension subtest of the Comprehensive Tests of Basic Skills (1968)
6. Comparative performance of individual learners--standardized reading achievement tests	Reading Comprehension subtest of the Comprehensive Tests of Basic Skills (1968)
7. Mastery after instruction	Postassessment Following Instruction Form (Appendix I)
8. Skill retention	Wisconsin Tests of Reading Skill Development: Comprehension subtests

TABLE 8

DATA COLLECTION SCHEDULE FOR THE FIELD TEST OBJECTIVES

Dates	Usability Objectives: Product Implementation, Feasibility, Deficiencies (1-3)*	Effectiveness Objectives: Implementation/ Preimplementation Comparison (4-6)*	Mastery after Instruction (7)*	Skill Retention (8)*
1973				
September		Break-in testing, Levels A-D; Baseline data, Gr. 1-3 (Gr. 1-4 site type B)		
October	Monitor Installation (Visit #1, 7 schools)			
November	Monitor Implementation (Visit #2, 5 schools)	Break-in testing, Levels E-F; Baseline data, Gr. 4-6, (Gr. 5-6 site type B)		Retest
December			Posttest after Instruction	
1974				
January	Monitor Implementation (Visit #2, 5 schools)			Retest
February				
March	Monitor Implementation (Visit #3, 5 schools)			Retest
April				
May	Monitor Implementation (Visit #3, 5 schools)		Collect Post-assessment Following Instruction forms	Retest
September		Comparison data, Gr. 1-3 (Gr. 1-4 site type B)		
October	Monitor Implementation (Visit #4, 9 schools)			
November		Comparison data, Gr. 4-6 (Gr. 5-6 site type B)		

*Numbers in parentheses refer to field test objective numbers

Almost all schools received four monitoring visits. The first visit had two purposes: to introduce the Center monitor to the field test faculties and to obtain information about the local inservice. The second and third visits, conducted approximately four months apart at each school, focused on the specifics of product implementation. The fourth was essentially a follow-through visit to ensure that implementation was continuing with the new school year. During visits 2, 3, and 4 the building principal or reading specialist was interviewed in addition to several (usually three) teaching staff members. Because of the implementation schedule, primary level teachers were the focus for the second visit, and intermediate level teachers were the focus for the third. Teacher/unit leader interviewees were selected by the reading specialists or building principals who were instructed that the interviewees should possess a high degree of product familiarity and represent a range of viewpoints.

Objective 2: Product feasibility. Feasibility of the Comprehension element for elementary schools is related to the degree to which field test faculties were able to meet the requisites for effective implementation. The interview guides previously described were the major data source, then, for information about implementation practices for both objectives. Additionally, the guides sought feasibility information in terms of teacher reaction to the product as a whole and to its specific objectives.

Objective 3: Product deficiencies. At the outset of the field test, schools were supplied with Comment Cards (Appendix I) upon which they were encouraged to record problems or comments about specific product components. Although the primary function of the cards was to alert the developer to specific problem areas, notations of success were also welcomed. The cards were collected during monitoring visits and were also periodically mailed to the Center from the schools.

Product Effectiveness

Objectives 4 and 5 were designed to contrast the performance of learners of the same age/grade level in the field test sites in different academic years--immediately prior to installation (preimplementation group) and near the end of the first year of implementation (implementation group). Each age-grade level preimplementation group served as the control group for the group of learners one year younger.

The instruments for measuring objectives 4, 5, and 6 comprised an evaluation testing program administered to the baseline, or preimplementation group, in September 1973 for grade levels 1 to 3 (1 to 4 in site type B schools) and in November 1973 for grade levels 4 to 6 (5 to 6 in site type B schools). The testing program was then administered to the comparison, or implementation group, one year later. All materials and scoring services associated with the testing program were provided by the Center; the field test faculties administered the tests.

Objective 4: Comparative performance--program-embedded tests. The Wisconsin Tests of Reading Skill Development: Comprehension subtests were the assessment instruments used to compare the mastery levels on the product's objectives of the implementation group versus the preimplementation group. The tests that were administered sampled from all of the Comprehension strands with the exception of Affixes. The Affix tests were not sampled because their value had been questioned. A

combination of usually three tests comprised a single test sitting. Table 9 lists the subtests used at each grade level according to site type. Table 2 should be consulted with respect to the skill levels and numbers listed.

A computerized randomization program was used to assign students at each grade level to the test sittings. The test groups were formed from school-provided class lists. A test sitting group was usually composed of 20 to 30 students randomly selected from all the classrooms or units in

TABLE 9

PROGRAM-EMBEDDED TESTS USED FOR COMPARATIVE PERFORMANCE ACCORDING TO SITE TYPE AND GRADE LEVEL

	Sites Where Typical Reading Achievement Was:											
	At or Above Grade Level[a]						Below Grade Level[b]					
	Grade Levels						Grade Levels					
Comprehension Strands	1	2	3	4	5	6	1	2	3	4	5	6
Main Idea			D1[c]	*D1	D1, E1			*B1	*B1	C1, D1	*C1	D1, E1
Sequence	*A2			D2		F2, G1	*A2				D2	*D2
Reasoning	A4, B3	B3, C3	*C3	*D3	*E3	E3, G3	A4, B3	*B3	A4, B3, C3	*C3	*C3	*D3
Detail		*B4	C4, *C5, D4	*D5	D4, E4, F5	*F5		*B4	*B4	B4, C4, *C5	*C4, *C5	D4, E4
Context				D6, E5							D6	
Affixes	[N O T S A M P L E D]											
Total Skills Tested	3	3	5	6	6	5	3	3	5	6	6	6
	Total = 28						Total = 29					

[a] N = 9 schools, site type A
[b] N = 2 schools, site type B
[c] Skill level and number
*Baseline data for these skills were computed from a random sample of each school's break-in test data.

a school spanning a particular grade level. The number of test sittings at each grade level and a school's grade level enrollment determined the number of times a student was tested. Students in schools with high enrollments were usually assigned to just one test sitting in 1973 and 1974; students in schools with low enrollments were assigned to more than one test sitting to accommodate the needs of the testing program.

The field test design called for the same testing program to be administered in both 1973 and 1974. Inspection of the 1973 baseline data, however, indicated a need for alterations in the tests being assessed. For example, the 1973 baseline performance was so high for some of the skills that gain scores were unlikely to result from the 1974 testing. The 1974 testing program was subsequently revised to accommodate the needed alterations. Tests administered in the 1974, but not in the 1973, testing program are identified in Table 9 by an asterisk.

All of the 1974 comparison data were derived from students assigned to test sittings by the randomization procedure previously described. The 1973 baseline data were also collected by this method for 19 of the 28 tests administered in the site type A schools and for 15 of the 29 tests administered in the site type B schools.

The 1973 instructional break-in test data became the baseline data for the 9 and 14 skills of the respective two site groups presented with asterisks in Table 9. Tests were selected from the skill levels at which the majority of the students were initially tested for break-in purposes at each grade level. (See Tables 5 and 6 for the majority break-in level for each grade level.) Data for random samples of 25 students who were administered the majority break-in level for each grade level have been reported as the 1973 baseline data for these skills presented with asterisks. This data source is not uniform, however, because of the variability from school to school in the percentages of students tested at the majority break-in level for each grade level. Thus, the baseline data for skills tested in the 1974, but not in the 1973, testing program usually represent less than 100% of the students at a grade level.

Objective 5: Comparative performance--standardized reading achievement tests. Subtests from the Cooperative Primary Tests (CPT) (1965) and Comprehensive Tests of Basic Skills (CTBS) (1968) comprised the standardized reading achievement test portion of the 1973-74 evaluation testing program. These tests were used as the program-independent measure for comparing the implementation group with the preimplementation group. The tests administered at each grade level are identified in Table 10 according to site type. The tests represented the best match possible between the content of the product's objectives and reading comprehension subtests of standardized tests. A standardized test was administered at each grade level with the exception of Grade 1 for the site type B schools.

The student randomization procedure described for objective 4 was also used for objective 5 to collect the 1973 baseline data at all grade levels and to collect the 1974 comparison data at grade levels 1 to 3 for the site type A schools and at grade levels 1 to 4 for the site type B schools. The reason for the nonrandomization in 1974 for the CTBS test sittings at grade levels 4 to 6 and 5 to 6 for the two respective site types will be explained in the next section.

TABLE 10

STANDARDIZED READING ACHIEVEMENT TESTS
USED FOR COMPARATIVE PERFORMANCE
ACCORDING TO SITE TYPE AND GRADE LEVEL

Standardized Tests	Sites Where Typical Reading Achievement Was At or Above Grade Level[a]						Sites Where Typical Reading Achievement Was Below Grade Level[b]					
	Grade Levels						Grade Levels					
	1	2	3	4	5	6	1	2	3	4	5	6
Listening Subtest, Form 12B, CPT (1965)	X						*	X				
Reading Subtest, Form 12B, CPT (1965)		X										
Reading Subtest, Form 23B, CPT (1965)									X			
Reading Comprehension Subtest, Form Q Level 1, CTBS (1968)			X	X						X		
Reading Comprehension Subtest, Form Q Level 2, CTBS (1968)					X	X					X	X

[a] N = 9 schools, site type A
[b] N = 2 schools, site type B
*No test administered

Objective 6: Comparative performance of individual learners--standardized reading achievement tests. Objective 5 involved a cross-sectional comparison of different groups; objective 6 involved a longitudinal comparison of the same students. Levels 1 and 2 of the CTBS Reading Comprehension subtest, administered as part of the 1973-74 evaluation testing program, were used as the assessment instruments. Data for this objective were obtained at grade levels 4, 5, and 6 for site type A students and at grade levels 5 and 6 for site type B students. Students who had been randomly assigned to the 1973 CTBS evaluation test sittings at grade levels 3, 4, and 5 (site type A) and 4 and 5 (site type B) were intentionally assigned to the 1974 CTBS sittings at grade levels 4, 5, and 6, and 5 and 6 respectively, for the two site types.

Objective 7: Percent masters after skill instruction. The developer-recommended procedure for determining whether learners have mastered the skill(s) for which they received instruction is administration of the product's criterion-referenced test(s) as postassessments. A learner is judged to be a skill master when she/he attains an 80% or higher score on the postassessment. To ascertain the percentage of learners mastering the product's objectives at an 80% level immediately after instruction in those skills, field test faculties were provided with copies of the Postassessment Following Instruction Form (Appendix I) at the beginning of the field test. Teachers were requested to provide specific information on the form--skill level and number, date assessed, number in skill group, and resulting masters and nonmasters--for each skill that they taught and for which a postassessment was given. The forms were collected from each school in May at the end of the 1973-74 school year and use of them was not reinstituted in September 1974 for the last three months of the field test. Therefore, the data collected represent an implementation period of eight months for primary level teachers and five months for intermediate level teachers.

Objective 8: Skill retention. The product's criterion-referenced tests were used to ascertain learner retention rates on the product's objectives. There was a minimum eight-week period between skill mastery and the retesting which was performed by Center personnel during the monitoring visits to each school. Two kinds of skill retention were assessed: retention from the break-in testing and retention after instruction. Testing for break-in retention involved the retesting of students on skills mastered at their initial break-in level. Since focused instruction on skills already mastered would not be warranted, break-in retention was intended as a measure of retention without intervening instruction. Because the Center had scored each school's break-in tests, the identification of students and skills mastered was readily available. Because of the schedule for the break-in testing, beginning of instruction, and monitoring activities, retesting for break-in retention was conducted during the November 1973 and January 1974 monitoring visits only.

Retesting for retention after instruction was conducted during the March and May 1974 monitoring visits. At the outset of the field test, teachers were requested to date their Comprehension pupil profile cards so that a record would be available of when learners became skill masters after instruction. Dates were to be entered by the specific skills printed on the cards. Groups for retesting were subsequently formed which either met or almost met the objective's criterion of a minimum eight-week intermission between mastery after instruction and retesting.

III

EVALUATION OF PRODUCT USABILITY

OBJECTIVE 1: PRODUCT IMPLEMENTATION

Descriptive information about product implementation in this report has been organized by requisites for effective implementation and by the attempts of the field faculties to meet them. A summary evaluation statement for each requisite is presented in Table 11. Requisites 1 to 3 refer to product installation, requisites 4 to 10 refer to the instructional, assessment, and management aspects of implementation. In the discussion which follows comprehensive information for each requisite is presented across the 10 field test sites. Variations in requisite attainment will be noted where significant with respect to the school variables--multiunit/conventional organization, reading achievement level, and number of Design elements being implemented.

Product Installation

Requisites 1 and 2 concern teacher inservice training; requisite 3 concerns placement of the learner into the program.

> Requisite 1: Local representatives of the field test schools must attend a one-day Center-sponsored inservice to acquire information regarding implementation of the product.

Approximately three representatives from each site attended the Center-sponsored inservice. See Chapter II for a description of the inservice and Appendix D for the inservice agenda. Results of the inservice evaluation were positive; a majority of the attendees rated 9 of the 10 sessions as "very useful," the highest category on a usefulness scale of 1 to 4. Additionally, all of the principal/reading specialist interviewees indicated that the Center inservice had provided sufficient information and materials about the product for them to conduct their local inservice. The sufficiency of the Center-sponsored inservice, then, was established for field test objective 1.

> Requisite 2: Within one month following the Center Inservice, local school representatives must conduct inservice sessions for local faculties to provide information and support for implementing the product. The agenda for the sessions should include

TABLE 11

ATTAINMENT OF REQUISITES FOR EFFECTIVE IMPLEMENTATION

Requisites	Results
1. Attendance at Center-sponsored inservice	Satisfactory.
2. Local inservice training	Generally satisfactory. Exception: Insufficient opportunities for keying local materials to the product's instructional objectives.
3. Identification of learners' initial instructional skill levels	Generally satisfactory. Exceptions: (1) New students not always tested within a month of entering school (2) Kindergarten break-in testing occurred in only 2 of 10 schools.
4. Instruction appropriate to learners' skill deficiencies	Generally satisfactory for implementors of formal pattern. Unsatisfactory for implementors of informal pattern in terms of frequency with which skill masters received instruction.
5. Instructional groups formed on basis of assessment information	Satisfactory for implementors of formal pattern. Generally satisfactory for implementors of informal pattern in terms of teachers' awareness of their developmental reading group members' skill deficiencies and subsequent instruction.
6. Skill instruction for a minimum of two hours per week (selection of a Center-suggested scheduling alternative)	Satisfactory for scheduling aspect. Number of minutes per week spent on skill instruction in descending order: (1) Formal implementation pattern--no rotation of Design elements; (2) Formal implementation pattern--rotation of Design elements; (3) Informal implementation pattern.
7. Postassessment following instruction	Satisfactory.
8. Regrouping of nonmasters	Satisfactory for implementors of formal pattern. Unsatisfactory for implementors of informal pattern.
9. Up-to-date record keeping	Satisfactory.
10. Completion of at least one skill level per grade level	No hard evidence available. A satisfactory result can be estimated with a high degree of confidence for implementors of the formal pattern and with less confidence for implementors of the informal pattern.

a description of the product, strategies for scheduling instruction, and opportunities for keying local materials to the product's behavioral objectives.

All sites conducted a local inservice within a month and a half after the Center inservice. The sessions ranged in length from 1 1/2 to 4 hours and all agendas included a description of the product and strategies for scheduling instruction. The sessions were not alike with respect to the amount of time provided for keying local materials to the product's behavioral objectives. The unavailability of materials for skill levels E to G was a deficiency for both the Center-led and local inservices. Once the materials for Levels E to G had become available, one school provided a full day of inservice for keying and another school a half day. Two schools provided approximately an hour for keying of materials during their inservice. For 6 of the 10 schools, no opportunity for keying local materials was provided during the local inservice.

A majority of the teacher interviewees reported their local inservice as adequate. Suggestions they offered for improvement included provision for (1) time for keying materials, (2) preparation time, (3) "hands-on" approach to materials prior to inservice, (4) more extensive inservice, and (5) several short, spaced-out inservices before and after the onset of instruction which would provide time for becoming familiar with the materials, keying, and the sharing of implementation problems and successes.

Requisite 3: Initial break-in testing must be conducted to identify initial instructional levels for learners in grades 1 to 6 (kindergarten second semester). Retesting must be conducted within three weeks at a higher or lower level for learners who were tested at an inappropriate break-in level. New learners must receive break-in testing within one month after entering school.

To place learners at grade levels 1 to 6 into the program at the beginning of the field test, break-in tests were administered for Levels A to D in September and for Levels E and F in November. Retesting up or down a level, required when learners show mastery of all or none of the skills at the level first tested, was completed within 1 to 1 1/2 months after results of initial testing had been received by the sites. The percentage of students requiring retesting is reported by skill and grade level in Table 5 for the sites where typical reading achievement is at or above grade level and in Table 6 for the sites where typical reading achievement is below grade level. The large percentages of children who required retesting may account for the 1 to 1 1/2 month period rather than the three-week period recommended in the requisite.

Interviewees during the second and third monitoring visits stated that new enrollees received break-in testing within a month after entering school. However, on the fourth visit, conducted near the end of the field test period in October of the 1974-75 school year, it was found that this was true for only two-thirds of the schools. The other one-third had not yet administered break-in tests to new students.

According to the requisite, kindergarten students were to receive break-in testing during the second semester of their first school year. This occurred at two of the 10 schools with instruction subsequent to

the break-in testing. Of the remaining eight schools, the 1973-74 kindergarteners received September break-in testing as 1974-75 grade 1 learners in three schools and had not received testing in five schools by the time of the October monitoring visit.

Instruction, Assessment, and Management

Requisites 4 to 10 pertain to specific steps of the implementation cycle after teacher inservice and learner placement into the program have been accomplished. As the field test progressed, the use of two distinctly different implementation patterns emerged--a formal pattern and an informal pattern (author-assigned terms). The major distinction between the two patterns lies in the membership and stability of the groups to which the skill instruction was addressed. Group membership for the formal pattern was determined by learners' mastery status on the skills taught during each instructional skill cycle. Skill groups were composed primarily of nonmasters of those skills. Membership changed as often as new skill groups were formed. Group membership for the informal pattern, on the other hand, was prescribed by learners' overall developmental reading needs. In other words, Design Comprehension skill instruction was incorporated as a basal, or developmental, reading group activity and the groups were relatively stable.

The formal implementation pattern was predominant in the eight schools where typical reading achievement is at or above grade level. All the primary level units in one multiunit school and a lower primary unit in another multiunit school were exceptions. The informal pattern was predominant in the two conventionally organized schools where typical reading achievement is below grade level.

Information for requisites 4 to 10 is presented with reference to the two implementation patterns, formal and informal.

> Requisite 4: The local faculty must demonstrate a commitment to the Comprehension element that ensures that every learner receives instruction appropriate to his skill deficiencies.

Once a learner's instructional level has been identifed and his/her mastery status for each skill at that level has been assessed, instruction should focus upon the skills initially not mastered. Because nonmastery is the major criterion for skill group membership, schools which implemented the formal pattern can be said to have generally attained this requisite. Learners generally received instruction only in the skills they had not mastered. Of the interviewees in schools implementing the formal pattern, 62.5% reported that only nonmasters of a skill received instruction in that skill. Occasionally learners received instruction in skills they had already mastered. There was a variety of reasons for this: they had barely achieved mastery at break-in; they needed skill review; they were not applying the skill; or instruction was not currently being offered for a skill they had not mastered.

In schools and units using the informal pattern, instruction was less targeted, primarily because skill mastery status was not the criterion for membership in a particular developmental reading group. Although learners received instruction in skills they had not mastered, they also received instruction in skills they had mastered and at a much higher

frequency than was true for formal skill group learners. Just 1.1% of the interviewees implementing the informal pattern indicated that only the nonmasters of a skill received instruction.

Requisite 5: Instructional groups must be formed on the basis of assessment information.

Assessment information about each learner's skill development status is transferred to a pupil profile card by notching holes open for skills that have been mastered and by leaving holes unnotched, or closed, for skills not yet mastered. Skewering of the holes on the cards identifies the masters and nonmasters for each skill and is the technique by which skill groups of nonmasters are formed. Transfer of assessment information to the profile cards and subsequent skewering of the cards is a continuous process. Users of the formal implementation pattern always formed instructional skill groups on the basis of the profile cards, i.e., assessment information.

Users of the informal pattern did not form instructional skill groups on the basis of assessment information, as a learner's Design Comprehension skill status was not the criterion for membership in a particular developmental reading group. Decisions about what skills needed to be taught, however, were not based solely on teacher judgment. Interviewees implementing the informal pattern indicated that they used profile card information to identify their groups' skill needs.

Requisite 6: Instruction must be provided that is related to the skill deficiencies of the instructional groups. Two hours per week of skill instruction is the minimum time requirement.

Two hours per week of Comprehension skill instruction was proposed as the minimum time requirement when the field test plan was first formulated. When inservice materials were prepared to offer teachers alternatives for scheduling instruction, it became clear that two hours per week every week might not be feasible.

Five plans were subsequently offered to the field test participants to help them schedule instruction. Each plan was an alternative for incorporating Design skill instruction and either basal or individualized reading instruction into the traditional daily "reading" block. The plans differed in the division of time for skill and basal instruction and in grouping procedures, that is, whether concurrent groups were formed for each Design skill area, or skill areas were rotated. It was decided that the requisite should be judged attained if the schools implemented any of the scheduling alternatives.

Implementation of the same scheduling alternative by all the units or grade levels within a school was not a field test requirement. Four schools did implement an alternative on a school-wide basis. Two of these schools used the informal implementation pattern and offered daily instruction in Design Comprehension skills; one offered daily Comprehension instruction in formal skill groups; and one, using the formal pattern, rotated Design elements for instruction--a two-week cycle of Word Attack was rotated with a two-week cycle of Comprehension in the school's primary unit, while two-week cycles of Study Skills and Comprehension

were rotated in its intermediate unit. Six schools implemented multiple plans that incorporated rotation as well as nonrotation of skill cycles. Obviously there was wide variability in the scheduling of implementation, not only among schools, but also within schools.

The number of Design elements a school was implementing was not a differentiating variable in the scheduling alternatives adopted. For example, of the four schools that were implementing just Word Attack and Comprehension, only one school offered instruction daily in both elements. Two schools rotated cycles of Word Attack and Comprehension in their primary units, but offered Comprehension instruction daily in the intermediate units. At the fourth school, the primary unit rotated Comprehension instruction with instruction in a content area, while its intermediate unit provided Comprehension skill instruction without rotation. Likewise, no single scheduling preference emerged among the six schools implementing Study Skills in addition to Word Attack and Comprehension. The four schools that adopted a scheduling alternative on a school-wide basis were not the same four schools that were implementing just Word Attack and Comprehension. The six schools that implemented multiple scheduling alternatives were not the same six schools that were implementing Study Skills in addition to Word Attack and Comprehension.

Observation had indicated that the presence of Study Skills as an implementation variable was not worth investigating for several reasons. The degree and pattern of Study Skills implementation varied markedly within and across the six schools. The commercial edition of Study Skills had just been published at the start of the Comprehension field test and it took some schools several months to change from the field test edition to the commercial edition because of the substantial revisions that had been made. Therefore, the changeover created a prolonged break in Study Skills implementation for some schools. Also, the content-oriented as well as skill-oriented approaches to Study Skills implementation provided flexibility in scheduling for instruction. Across the six schools implementing all three Design elements, there was no visible pattern relative to Study Skills implementation that differentiated those who rotated elements for instruction from those who did not.

Although scheduling was characterized by wide variability, some generalizations can be supported. Across the ten schools, the rotation of skill cycles for Word Attack and Comprehension instruction was predominant at the primary grade levels along with a daily basal reading period. The schools and units implementing the informal pattern were exceptions. Here, Word Attack, Comprehension, and basal instruction occurred daily without rotation. Among the schools implementing the formal pattern, some used schedules that involved rotation of skill cycles and some did not. In schools implementing Study Skills through a skill-oriented approach, there was a tendency for Comprehension instruction to be rotated with Study Skills at the intermediate grade levels. Rotation of Word Attack and Comprehension instruction was seen less often at the intermediate levels because the majority of learners have completed Word Attack by the time they have reached that level.

The average number of minutes per week spent on Comprehension skill instruction in schools implementing the formal pattern was derived by multiplying the total number of days by the minutes per day spent in a Comprehension skill cycle and dividing by the length of time between

regrouping for Comprehension instruction. The average number of minutes is presented in Table 12 for two groups of interviewees, those who did not rotate Design elements for instruction, and those who did. Interviewees who did not rotate, regrouped for Comprehension instruction either every two weeks or three weeks and provided a weekly average of 103.3 minutes of instruction. The primary level interview data for this group were not analyzed because they were either incomplete or suspect. Interviewees who rotated Design elements for instruction regrouped for Comprehension either every four weeks, every six weeks, or every nine weeks; the average number of minutes per week they spent on Comprehension instruction was 47.7. The majority of interviewees for both groups indicated that they were usually teaching just one skill group, that is, they did not divide their time among several groups.

The data from 16 interviewees who implemented the informal pattern are incomplete because the majority were unable to report either the

TABLE 12

AVERAGE NUMBER OF MINUTES PER WEEK INTERVIEWEES USING FORMAL IMPLEMENTATION PATTERN SPENT ON COMPREHENSION SKILL INSTRUCTION ACCORDING TO REGROUPING FREQUENCIES

Interviewees	Regrouping Frequencies				
N(Grade levels represented)	2 weeks	3 weeks	4 weeks	6 weeks	9 weeks
Nonrotation of Design Elements for Instruction					
5 (Intermediate)	109.0 (60-125)*				
4 (Intermediate)		96.2 (75-140)			
	Average: 103.3 minutes				
Rotation of Design Elements for Instruction					
5 (3 Primary; 2 Intermediate)			56.0 (35-75)		
6 (4 Primary; 2 Intermediate)				43.7 (21-70)	
1 (Primary)					30.0
		Average: 47.7 minutes			

*Range

average number of days spent on a particular skill, the number of minutes per day, or how often they began instruction in a new skill. The number of days reported ranged from 6 to 35, and the number of minutes per day Design Comprehension instruction was given to each developmental reading group ranged from 5 to 10. Therefore, a developmental reading group might have received a minimum of 25 or maximum of 50 minutes of Design Comprehension skill instruction each week.

Requisite 7: Learners must be postassessed following instruction in order to ascertain their mastery level.

Interviewees of both implementation patterns reported that they always postassessed following instruction. The product's criterion-referenced tests were used as the assessment instruments. Postassessment was a scheduled activity that signaled the end of a skill cycle for implementors of the formal pattern. Postassessment for a skill was less scheduled for implementors of the informal pattern and occurred when learners appeared to be ready for it.

Requisite 8: Learners must be regrouped in a manner that is consistent with their current skill needs.

This requisite is related to several of the other requisites. Its attainment is dependent particularly upon attainment of requisites 5, 7, and 9 which pertain respectively to skill groups formed on the basis of assessment information, postassessment following instruction, and up-to-date record keeping (see below for discussion of requisite 9). Requisite 8 is also interrelated with instruction targeted at learners' skill deficiencies (requisite 4). Implementors of the formal pattern can be said to have satisfactorily attained requisite 8. They regrouped learners for instruction that was consistent with their current skill needs by postassessing after instruction and by forming skill groups on the basis of profile cards, i.e., assessment information. Formal implementors regrouped for Comprehension every two to nine weeks (see requisite 6), and their skill groups were composed primarily of nonmasters (see requisite 4).

Implementors of the informal pattern did not regroup in order to provide instruction consistent with their learners' current skill needs. Informal implementors were cognizant of their developmental reading group members' skill deficiencies, they postassessed after instruction, and they kept group members' profile cards up-to-date. However, masters as well as nonmasters frequently received instruction in a skill. That is, instruction was targeted toward areas where learners were proficient as well as where they were deficient.

Requisite 8 is based on the assumption that regrouping on the basis of nonmastery is the most direct and efficient method of providing instruction focused on the current skill needs of learners. Implementors of the formal pattern can be said to have attained requisite 8 while implementors of the informal pattern cannot.

Requisite 9: Profile cards must be kept up-to-date and in a fashion that ensures their utility in instructional decisions.

Interviewees of both implementation patterns reported that the Comprehension profile cards or other recordkeeping devices, such as wall charts, were kept up-to-date.

Requisite 10: New skill groups must be formed at a rate that ensures completion of at least one level per grade in a school year throughout the field test period.

The most precise method of measuring this requisite would have been to analyze the differences between the number of skills mastered upon entering the program and the number of skills mastered at the end of the field test period for samples of learners from the field test sites. However, the magnitude of the data-gathering needs for the entire field test precluded use of this method. A less precise estimate was obtained by analysis of the number of skills at each skill level and the regrouping frequencies cited in the description of requisite 6.

The number of skills at each level follows:

Level A	4 skills
Level B	4 skills
Level C	5 skills
Level D	6 skills
Level E	6 skills
Level F	6 skills
Level G	5 skills

Learners at the primary level working at Levels A to C would have had to master an average of 4.33 skills to complete at least one level per grade during the field test period; learners at the intermediate level working at Levels D to G would have had to master an average of 5.75 skills. Using the regrouping frequencies from Table 12 and a 40-week period as a school year base, learners who were regrouped for Comprehension every two, three, four, six, and even nine weeks, would have had the opportunity to receive instruction for the average number of skills cited above. This analysis applies only to implementors of the formal pattern.

Comparable data are not available for implementors of the informal pattern. Interviewees were usually unable to report how often they began instruction in a new skill. Further, it is not known how often a learner received instruction in skills not mastered, as opposed to skills mastered. It can only be surmised that learners of the informal pattern did complete at least one skill level during the field test period.

Summary

Evaluative information about product implementation has been presented in relation to the attainment status of field test sites for each of the developer-recommended requisites for effective implementation.

A summary evaluation statement for each requisite was provided in Table 11. The first three requisites pertained to product installation and were assessed as satisfactorily attained, with the exception of provision of sufficient opportunities for the keying of local materials to the product's instructional objectives and placement testing for new students and second semester kindergarten-level students.

Requisites 4 to 10 referred to the instructional, assessment, and management aspects of implementation. Variability in the attainment of these requisites was described in relation to the formal and informal implementation patterns used by the field test faculties. For the formal pattern, instructional groups were formed on the basis of common skill needs and membership changed as often as new skill groups were formed. For the informal pattern, instructional groups were formed on the basis of basal reader ability with the membership of these groups remaining relatively intact. Implementors of the formal pattern were seen as having attained requisites 4 to 9 satisfactorily. For implementors of the informal pattern, the results were satisfactory for requisites 7 and 9, generally satisfactory for requisites 5 and 6, and unsatisfactory for requisites 4 and 8. Satisfactory attainment for both implementation patterns for requisite 10 was based on an estimate rather than actual evidence.

It can be concluded that the teacher's resource files, teacher's planning guide and Center-sponsored inservice provided sufficient information for the field test faculties to implement the product according to the requisites for effective implementation. Whether the requisites are attained or not is dependent upon the implementation pattern which school staff members elect to use rather than upon the sufficiency of the product's component materials.

OBJECTIVE 2: PRODUCT FEASIBILITY

The evaluative information provided for objective 1 showed that the Design Comprehension element can be installed and implemented according to the developer's plan, which is one measure of product feasibility. Teacher acceptance and degree of enthusiasm are additional measures.

During the third monitoring visit, each school's principal or reading specialist was asked to rate teacher reaction to the Design Comprehension program. Their ratings are presented in Table 13. From Table 13 it is clear that most of the staff at the two site types had a positive reaction to the program.

Also during the third monitoring visit, the 40 teacher/unit leader interviewees were asked to provide, independently of the interview, their perceptions of the program by rating statements on a five-point scale from (1) "strongly disagree" to (5) "strongly agree." The 40 interviewees represented 22% of the field test staff since the total number of teaching staff members across the ten schools was 181. The 40 included 16 primary level teachers and 24 intermediate level teachers, 32 of whom were using the formal implementation pattern, and 8, the informal pattern.

TABLE 13

PRINCIPAL/READING SPECIALIST RATINGS OF STAFF REACTIONS TO WDRSD: COMPREHENSION

		Reaction			
	Staff	Negative	Lukewarm	Positive	Enthusiastic
Site Type A					
Schools where typical reading achievement is at or above grade level (N = 9)*	Most	1[a]	1[a]	9	-
	Some	-	2	-	2
	A few	2	1	-	1
Site Type B					
Schools where typical reading achievement is below grade level (N = 2)	Most	-	-	2	-
	Some	-	1	-	1
	A few	-	-	-	-

*N = 9 here, rather than 8, because one school system has separate buildings and administrators for its primary and intermediate level students.

[a]A particular grade level at one school

Table 14 presents the interviewees' degree of agreement, according to implementation patterns, for nine statements. Statement 1 refers to agreement with the selection of skills identified on the whole. Statements 2 to 7 refer to the objectives in each of the six strands. When the percent of respondents for categories 4 and 5 are summed, it is clear that implementors of both patterns agreed with statement 1, that the Design had correctly identified skills students need for reading comprehension. There was also a high degree of agreement among the interviewees with respect to the objectives that had been identified for the Main Idea and Context strands. The lower percent of interviewees agreeing with the Sequence, Reasoning, Detail, and Affixes objectives confirmed other field test data which indicated the need for revisions in those strands.

Statements 8 and 9 were designed to measure degree of enthusiasm for the product and the product's perceived effectiveness. In summing the percent respondents for categories 4 and 5, 72% felt that spending extra time to teach the skills was worthwhile. Ratings on this measure of enthusiasm were highest for the formal implementors; over half of the informal implementors chose the neutral category for statement 8. These same proportions between the two groups were maintained for statement 9, but there was more spread across the rating categories. Slightly more than half of the formal implementors agreed that the Design enabled them to teach comprehension skills better than any other program they had

TABLE 14

THIRD MONITORING VISIT INTERVIEWEES' DEGREE OF AGREEMENT WITH STATEMENTS ABOUT WDRSD: COMPREHENSION

Implementation Pattern*	N Respondents	Mean Rating	% Strongly Disagree (1)	% Disagree (2)	% Neutral (3)	% Agree (4)	% Strongly Agree (5)
1. The Wisconsin Design has identified skills that students need for reading comprehension.							
Formal	32	4.22	0.0	3.1	3.1	62.5	31.2
Informal	8	4.00	0.0	0.0	12.5	75.0	12.5
Total	40	4.17	0.0	2.5	5.0	65.0	27.5
2. Mastery of the objectives in the Main Idea strand is essential for reading comprehension.							
Formal	30	4.30	0.0	0.0	3.3	63.3	33.3
Informal	7	3.71	0.0	0.0	28.6	71.4	0.0
Total	37	4.19	0.0	0.0	8.1	64.9	27.0
3. Mastery of the objectives in the Sequence strand is essential for reading comprehension.							
Formal	30	3.83	0.0	6.8	16.7	63.3	13.3
Informal	6	3.50	0.0	0.0	50.0	50.0	0.0
Total	36	3.78	0.0	5.5	22.2	61.1	11.1
4. Mastery of the objectives in the Reasoning strand is essential for reading comprehension.							
Formal	27	4.00	0.0	3.7	14.8	59.3	22.2
Informal	8	3.62	0.0	0.0	37.5	62.5	0.0
Total	35	3.91	0.0	2.9	20.0	60.0	17.1
5. Mastery of the objectives in the Detail strand is essential for reading comprehension.							
Formal	30	3.93	0.0	0.0	23.3	60.0	16.7
Informal	7	3.71	0.0	14.3	14.3	57.1	14.3
Total	37	3.89	0.0	2.7	21.6	59.4	16.2
6. Mastery of the objectives in the Context strand is essential for reading comprehension.							
Formal	24	3.92	0.0	4.2	8.3	79.2	8.3
Informal	8	4.00	0.0	0.0	12.5	75.0	12.5
Total	32	3.94	0.0	3.1	9.4	78.1	9.4

(continued)

Table 14 (cont.)

Implementation Pattern	N Respondents	Mean Rating	% Strongly Disagree (1)	% Disagree (2)	% Neutral (3)	% Agree (4)	% Strongly Agree (5)
7. Mastery of the objectives in the Affixes strand is essential for reading comprehension.							
Formal	24	3.87	0.0	0.0	25.0	62.5	12.5
Informal	8	3.37	0.0	0.0	62.5	37.5	0.0
Total	32	3.75	0.0	0.0	34.4	56.2	9.4
8. Spending extra time to teach the Design's Comprehension skills is worthwhile.							
Formal	32	4.06	0.0	3.1	18.7	46.9	31.2
Informal	7	3.57	0.0	0.0	57.1	28.6	14.3
Total	39	3.97	0.0	2.6	25.6	43.6	28.2
9. The Wisconsin Design enables me to teach comprehension skills better than any other program I've used.							
Formal	29	3.38	3.4	20.7	20.7	44.8	10.3
Informal	8	3.12	0.0	12.5	62.5	25.0	0.0
Total	37	3.32	2.7	18.9	29.7	40.5	8.1

*The formal implementation pattern was predominant in the eight site type A schools; the informal implementation pattern was predominant in the two site type B schools.

used, while more than half of the informal implementors chose the neutral rating for statement 9. Across all nine statements, a majority of the formal implementors rated in categories 4 and 5, and a majority of the informal implementors rated in categories 3 and 4.

During the fourth monitoring visit, conducted near the end of the field test, the 30 teacher/unit leader interviewees were asked how they felt about continuing with the program. Of the responses, 83.3% were positive, 10.0 neutral, and 6.7% negative.

The number of interviewees for the third and fourth monitoring visits is small in comparison to the total number of school staff who were implementing the program. Nevertheless, the data for the formal implementors are generalizable since a majority of those interviewees were from multiunit schools and were presenting a unit viewpoint, rather than an individual viewpoint. It can be concluded that school staff in general considered the Design's Comprehension component a viable program. Staff members who used the formal implementation pattern were, on the whole, quite enthusiastic about the program. Reactions to the program for interviewees of the informal implementation pattern were more neutral.

OBJECTIVE 3: PRODUCT DEFICIENCIES

Comment Cards (Appendix H) filled out by the field test teachers alerted the developer to deficiencies in the product's materials.

Specific component materials receiving comments were the teacher's planning guide, teacher's resource files, and the criterion-referenced tests. There are separate teacher's planning guides for Word Attack, for Study Skills, and for Comprehension, and one guide for Self-Directed, Interpretive, and Creative Reading. The need was expressed for a single planning guide that would provide several specific examples of how to schedule for concurrent implementation of all the Design elements.

Although the teacher's resource files received many positive comments, some teachers felt that more variety was needed in the type of skill development activities offered. They advocated that activities be less teacher-directed, adaptable to independent work, less paper and pencil, and more "game-oriented." The inclusion of activities for skill application was also suggested.

Tests most frequently cited as having problems were those in the Sequence, Reasoning, Detail, and Affix strands. Teachers commented that the memory load was too great for the Sequence tests at Levels A, B, and C and that the picture size was too small for both the Sequence and Reasoning tests at Levels A and B. Teachers also identified test items where the picture content was confusing. Some teachers felt that there was not enough difference between the levels of the skills in a strand as, for example, in the Sequence "Before or After" skills at Levels B and C, and Context at Levels D and E. Some children were able to master a Detail skill at a higher level but not at a lower level, calling the leveling of the skills into question. Across the strands, teachers identified test items that were particularly confusing or troublesome for their students.

Teachers also identified more general problem areas. Many felt that there was too great a gap between Levels B and C. That is, children who were able to rather rapidly move through the listening skills at Level A and B could not then handle the reading required at Level C. They also felt that the leap from listening skills at Levels A and B to reading at Level C was too great. It was recommended that reading be required for some of the Level B skills as a transition to Level C. A lower vocabulary level for Level C was also recommended. The other general problem area concerned the Reasoning strand. Both school administrators and teachers advised that more teacher-directed material was needed for the upper-level reasoning skills. Teachers did not have the background in reasoning they felt was requisite for teaching those skills.

IV

EVALUATION OF PRODUCT EFFECTIVENESS

The degree of implementation at the field test sites provides one context for evaluating the product effectiveness data presented for field test objectives 4 to 8. The observed implementation period provides another context for evaluation of the effectiveness data, particularly in relation to comparative performance on the program-embedded tests, objective 4. As originally designed, the field test term permitted an implementation period of nine months for the primary levels (Grades 1 to 3) and eight months for the intermediate levels (Grades 4 to 6) before comparison data were collected for the implementation groups. A majority of the primary level teachers began implementation in November of 1973; but it is questionable whether actual instruction had gotten underway by Fall 1974 before the comparison data were collected in late September. Therefore, the actual implementation period for the primary levels was approximately seven months. Intermediate level teachers in eight of the ten schools began instruction on schedule in January 1974, and all but one school had started in the Fall by October 1974. The actual implementation period for the intermediate levels before the comparison data were collected in late November, then, was also approximately seven months.

Virtually no implementation occurred for Grade 1 before the comparison data were collected. Second semester kindergarten implementation occurred in just two of the ten schools. Implementation of the year-round-school concept began in 1974 in one of these two schools, meaning that comprehension instruction at all grade levels began again in July 1974 for two tracks of students and in October 1974 for the third track. Except for the year-round-school, the beginning and ending of school dates were approximately alike for all the field test sites.

The evaluation for objectives 4 and 5 was designed to contrast the performance of learners of the same age/grade level at the field test sites in different academic years, immediately prior to installation (Fall 1973, preimplementation group) and near the end of the first year of implementation (Fall 1974, implementation group). Each age/grade level preimplementation group served as the control group for the group of learners one year younger. The grade levels reported in the tables for objectives 4 and 5 identify the grade levels tested; the change scores reflect the results of implementation efforts between Fall 1973 and 1974. For example, change scores reported for grade 5 show the results of 1973-74 implementation in grade 4 as well as any implementation in grade 5 prior to the Fall 1974 testing.

OBJECTIVE 4: COMPARATIVE PERFORMANCE--PROGRAM-EMBEDDED TESTS

Results of comparisons on the program-embedded tests between the preimplementation groups and the implementation groups are presented in Table 15 for the site type A schools and in Table 16 for the site type B schools. Percent of mastery information was obtained by computing the percent of students tested who performed at an 80% or higher level on the test. Included in the tables are the values for the independent sample t tests computed on the raw score change of each skill assessed.

Site Type A Comparative Performance

Of the 28 Design objectives assessed, the implementation groups (Fall 1974 data) mastered 22 objectives, or 79%, at a higher level than the preimplementation groups (Fall 1973 data). Eight of these 22 gains and 1 of the 6 losses involve skills for which the 1973 and 1974 data sources are not uniform. See "Product Effectiveness," Chapter II, for a discussion of the data sources.

The raw score changes were statistically significant for 9 of the 22 gains and for 2 of the 6 skills for which there were losses. Data sources were not uniform for 3 of these 9 statistically significant gains and for 1 of the 2 significant losses. Skills and grade levels for which gains were statistically significant were D1, Grades 4 and 5; A2, Grade 1; D2, Grade 4; B3, Grade 2; E3, Grade 6; B4, Grade 2; and D6 and E5, Grade 4. Statistically significant losses occurred for A4 at Grade 1 and E3 at Grade 5.

When the comparisons are analyzed by grade level clusters, 6, or 54.5%, of the 11 comparisons for the primary levels (1 to 3) were positive; 16, or 94.1%, of the 17 comparisons for the intermediate levels (4 to 6) were positive. It should be recalled that in the evaluative information presented for product implementation, field test objective 1, it was found that intermediate level interviewees of the formal implementation pattern spent a higher average number of minutes per week in skill instruction than did primary level interviewees.

Site Type B Comparative Performance

Of the 29 Design objectives assessed in these two schools, the implementation groups mastered 21 objectives, or 72%, at a higher level than the preimplementation groups. When raw score changes are compared, gains occurred for 22, or 76%, of the skills. Eleven, or half, of the raw score gains and 3 of the 7 losses involve skills for which the 1973 and 1974 data sources are not uniform.

Raw score changes were statistically significant for 9 of the 22 gains and for 3 of the 7 losses. The 3 significant losses all occurred at grade level 1 in schools where there had been no kindergarten or grade 1 implementation prior to the testing. These losses, then, cannot be attributed to program effect. Data sources were not uniform for 5

TABLE 15

COMPARATIVE PERFORMANCE ON PROGRAM-EMBEDDED TESTS OF STUDENTS IN SCHOOLS WITH TYPICAL READING ACHIEVEMENT AT OR ABOVE GRADE LEVEL (SITE TYPE A)*

Comprehension Skills	Grade Level	Fall 1973 N	Fall 1973 Raw score mean	Fall 1973 Percent masters	Fall 1974 N	Fall 1974 Raw score mean	Fall 1974 Percent masters	1973-74 Change Raw score mean	1973-74 Change Percent masters	t
MAIN IDEA STRAND										
D1--Topic Sentences (15)[a]	3	218	7.33	24.3	248	7.24	28.6	-.09	4.3	-.217
D1--Topic Sentences[b] (15)	4	221	9.86	49.3	217	12.14	73.7	2.28	24.4	6.263***
D1--Topic Sentences (15)	5	250	12.24	73.2	236	13.12	83.1	.88	9.9	2.894***
E1--Main Idea (13)	5	250	9.86	50.8	236	10.11	57.6	.25	6.8	1.008
SEQUENCE STRAND										
A2--First or Last Event[b] (14)	1	225	9.95	39.1	227	10.85	54.2	.90	15.1	3.225***
D2--Explicit Sequence (20)	4	222	14.85	10.4	217	16.00	62.2	1.15	51.8	3.194***
F2--Implicit Sequence (30)	6	227	26.24	80.6	247	26.88	84.6	.64	4.0	1.632
G1--Implicit Sequence (12)	6	227	7.24	29.1	247	7.45	28.3	.21	-0.8	.795
REASONING STRAND										
A4--Outcomes (12)	1	258	9.61	60.5	227	8.71	41.9	-.90	-18.6	-5.294***
B3--Outcomes (12)	1	258	6.95	19.8	227	6.53	16.7	-.42	-3.1	-1.735
B3--Outcomes (12)	2	245	8.59	47.3	255	9.20	49.8	.61	2.5	2.877***
C3--Cause-Effect (22)	2	245	13.92	23.7	255	14.02	29.4	.10	5.7	.257
C3--Cause-Effect[b] (22)	3	225	17.44	60.0	240	17.64	60.4	.20	.4	.533
D3--Making Deductions[b] (20)	4	221	17.39	79.2	218	17.75	80.7	.36	1.5	1.323
E3--Making Deductions[b] (24)	5	214	19.75	60.7	236	18.93	52.1	-.82	-8.6	-2.546**

(continued)

Table 15 (cont.)

Comprehension Skills	Grade Level	Fall 1973 N	Fall 1973 Raw score mean	Fall 1973 Percent masters	Fall 1974 N	Fall 1974 Raw score mean	Fall 1974 Percent masters	1973-74 Change Raw score mean	1973-74 Change Percent masters	t
E3--Making Deductions (24)	6	228	19.33	54.4	244	20.46	68.4	1.13	14.0	3.668***
G3--Induction (15)	6	228	11.40	60.5	244	11.99	66.8	.59	6.3	2.114
DETAIN STRAND										
B4--Detail[b] (20)	2	224	15.49	60.3	255	16.77	71.8	1.28	11.5	5.079***
C4--Detail (20)	3	206	15.41	66.5	240	15.22	67.1	-.19	.6	-.421
C5--Negatives[b] (23)	3	225	17.05	46.2	248	17.07	47.6	.02	1.4	.046
D4--Clauses (21)	3	206	13.82	29.1	248	13.21	23.4	-.61	-5.7	-1.689
D5--Passives[b] (21)	4	221	15.78	46.2	217	16.18	55.8	.40	9.6	1.201
D4--Clauses (21)	5	240	17.27	66.7	229	17.73	74.2	.46	7.5	1.637
E4--Embedded Parts (20)	5	240	16.34	67.9	229	16.66	75.5	.32	7.6	1.344
F5--Embedded Parts and Clauses (20)	5	240	14.60	45.4	229	14.71	48.5	.11	3.1	.338
F5--Embedded Parts and Clauses[b] (20)	6	222	16.48	69.7	247	16.87	74.1	.39	4.4	1.455
CONTEXT STRAND										
D6--Context (12)	4	223	9.29	61.4	218	10.22	74.8	.93	13.4	3.940***
E5--Context (12)	4	223	7.32	26.5	218	7.81	24.3	.49	-2.2	2.112**

[a] Maximum possible score
[b] 1973 and 1974 data sources not uniform
* N = 9 schools
**$p \leq .05$
***$p \leq .01$

TABLE 16

COMPARATIVE PERFORMANCE ON PROGRAM-EMBEDDED TESTS OF STUDENTS IN SCHOOLS WITH TYPICAL READING ACHIEVEMENT BELOW GRADE LEVEL (SITE TYPE B)

Comprehension Skills	Grade Level	Fall 1973 N	Fall 1973 Raw score mean	Fall 1973 Percent masters	Fall 1974 N	Fall 1974 Raw score mean	Fall 1974 Percent masters	1973-74 Change Raw score mean	1973-74 Change Percent masters	t
MAIN IDEA STRAND										
B1--Paragraph Topics[a] (15)[b]	2	50	9.88	44.0	54	9.63	38.9	-.25	-5.1	-.311
B1--Paragraph Topics[a] (15)	3	50	10.88	52.0	56	12.02	64.3	1.14	12.3	1.800
C1--Paragraph Topics (15)	4	35	11.34	54.3	49	11.43	55.1	.09	0.8	.122
D1--Topic Sentences (15)	4	35	5.03	2.9	49	5.96	14.3	.93	11.4	1.313
C1--Paragraph Topics[a] (15)	5	50	11.32	56.0	47	12.98	76.6	1.66	20.6	2.725***
D1--Topic Sentences (15)	6	49	9.16	44.9	49	9.43	34.7	.27	-10.2	.318
E1--Main Idea (13)	6	49	6.78	10.2	49	7.33	14.3	.55	4.1	.948
SEQUENCE STRAND										
A2--First or Last Event[a] (14)	1	50	7.30	12.0	59	5.39	5.1	-1.91	-6.9	-3.321***
D2--Explicit Sequence (20)	5	49	10.88	0.0	47	15.85	61.7	4.97	61.7	5.772***
D2--Explicit Sequence[a] (20)	6	50	12.46	30.0	49	13.82	42.9	1.36	12.9	1.431
REASONING STRAND										
A4--Outcomes (12)	1	57	8.74	38.6	59	6.07	5.1	-2.67	-33.5	-7.355***
B3--Outcomes (12)	1	57	5.09	1.8	59	3.02	1.7	-2.07	-0.1	-5.214***
B3--Outcomes[a] (12)	2	50	4.68	4.0	53	6.43	11.3	1.75	7.3	3.837***
A4--Outcomes (12)	3	54	9.11	51.9	51	10.06	72.5	.95	20.6	2.683***
B3--Outcomes (12)	3	54	6.26	16.7	51	8.20	33.3	1.94	16.6	3.599***

(continued)

Table 16 (cont.)

Comprehension Skills	Grade Level	Fall 1973 N	Fall 1973 Raw score mean	Fall 1973 Percent masters	Fall 1974 N	Fall 1974 Raw score mean	Fall 1974 Percent masters	1973-74 Change Raw score mean	1973-74 Change Percent masters	t
C3--Cause-Effect (22)	3	54	10.11	0.0	51	14.20	29.4	4.09	29.4	5.918***
C3--Cause-Effect[a] (22)	4	50	15.16	24.0	49	15.63	34.7	.47	10.7	.565
C3--Cause-Effect[a] (22)	5	50	14.48	24.0	50	17.36	48.0	2.88	24.0	4.011***
D3--Making Deductions[a] (20)	6	50	14.46	48.0	46	14.91	50.0	.45	2.0	.571
DETAIL STRAND										
B4--Detail[a] (20)	2	50	11.60	18.0	53	11.21	13.2	-.39	-4.8	-.503
B4--Detail[a] (20)	3	50	13.34	38.0	56	14.61	46.4	1.27	8.4	.336
B4--Detail (20)	4	39	16.85	69.2	47	16.77	74.5	-.08	5.3	-.126
C4--Detail (20)	4	39	13.33	41.0	47	14.32	55.3	.99	14.3	.860
C5--Negatives[a] (23)	4	50	13.44	16.0	47	14.74	29.8	1.30	13.8	1.385
C4--Detail[a] (20)	5	50	12.86	32.0	50	15.76	60.0	2.90	28.0	3.207***
C5--Negatives[a] (23)	5	50	13.28	8.0	47	17.38	48.9	4.10	40.9	4.778***
D4-Clauses (21)	6	52	14.90	38.5	46	15.50	34.8	.60	-3.7	1.016
E4--Embedded Parts (20)	6	52	14.31	42.3	46	14.24	37.0	-.07	-5.3	-.109
CONTEXT STRAND										
D6--Context (12)	5	46	8.26	34.8	50	8.32	36.0	.06	1.2	.115

[a] [b] 1973 and 1974 data sources not uniform
Maximum possible score
*N = 2 schools
** $p \leq .05$
*** $p \leq .01$

of the 9 significant gains and for 1 of the 3 significant losses. Skills and grade levels for which gains were statistically significant were C1, Grade 5; D2, Grade 5; B3, Grade 2; A4, Grade 3; B3, Grade 3; C3, Grade 3; C3, Grade 5; C4 and C5, Grade 5. Statistically significant losses occurred for A2, A4, and B3 at Grade 1.

Six, or 54.5%, of the 11 primary level raw score change comparisons were positive while 16, or 88.9%, of the 18 intermediate level comparisons were positive. Information from school personnel about the average number of minutes spent per week in skill instruction was imprecise and thus cannot be related to these comparisons.

When comparisons are analyzed by Comprehension strands across the two site type groups, gains occurred for 9 (82%) of the 11 Main Idea comparisons, for 6 (86%) of the 7 Sequence comparisons; for 13 (72%) of the 18 Reasoning comparisons; for 13 (72%) of the 18 Detail comparisons; and for all (100%) of the three Context comparisons.

OBJECTIVE 5: COMPARATIVE PERFORMANCE--STANDARDIZED READING ACHIEVEMENT TESTS

The Fall 1974 data source for grade levels 4 to 6 (site type A) and 5 to 6 (site type B) did not result from random assignment of students to the test. In order to measure field test objective 6, students who had been randomly assigned to the 1973 Comprehensive Tests of Basic Skills test sittings at grade levels 3, 4, and 5 (site type A) and 4 and 5 (site type B) were intentionally assigned to the 1974 CTBS sittings at grade levels 4, 5, and 6 and 5 and 6 respectively, for the two site type groups. The data, however, were uniformly derived from randomization procedures for the 1973 baseline data at all grade levels and for the 1974 comparison data at grade levels 1 to 3 for the site type A schools and at grade levels 1 to 4 for the site type B schools.

Comparison data for the preimplementation and implementation groups in terms of raw score means and normative information are presented in Table 17 for the site type A schools and in Table 18 for the site type B schools. Also provided are values for the independent sample *t* tests that were performed on the raw score changes.

Site Type A Comparative Performance

None of the six standardized test comparisons favored the preimplementation groups. Although kindergarten implementation occurred in just two of the nine schools, there was a raw score gain for the Listening subtest of the Cooperative Primary Test administered at Grade 1. Fall norms for this grade level are not available. The raw score gain for the CPT Reading subtest administered at Grade 2 was significant at the .01 level.

The most dramatic increase on the Comprehensive Tests of Basic Skills occurred at Grade 6 where the raw score gain was significant at the .05 level. Changes in percentile rank occurred at Grades 4 and 6 with increases of 4 and 7 respectively; there were no changes in either

TABLE 17

COMPARATIVE PERFORMANCE ON STANDARDIZED READING ACHIEVEMENT TESTS OF STUDENTS IN SCHOOLS WITH TYPICAL READING ACHIEVEMENT AT OR ABOVE GRADE LEVEL (SITE TYPE A)*

Standardized Test	Grade Level	Fall 1973 N	Fall 1973 Raw score mean	Fall 1973 PR[a]	Fall 1973 GE[a]	Fall 1974 N	Fall 1974 Raw score mean	Fall 1974 PR	Fall 1974 GE	1973-74 Change Raw score mean	1973-74 Change PR	1973-74 Change GE	t
Listening Subtest, Form 12B, CPT	1[b]	257	32.80	--	--	228	33.76	--	--	.96	--	--	1.717
Reading Subtest, Form 12B, CPT	2	244	27.77	63	--	255	30.25	63	--	2.48	0	--	2.910***
Reading Comprehension Subtest, Form Q Level 1, CTBS	3[c]	233	25.70	57	3.3	253	26.40	57	3.3	.70	0	.0	.777
Reading Comprehension Subtest, Form Q Level 1, CTBS	4[d]	223	33.36	49	4.1	229	34.08	53	4.2	.72	4	.1	.948
Reading Comprehension Subtest, Form Q Level 2, CTBS	5[e]	243	28.94	54	5.3	234	29.24	54	5.3	.30	0	.0	.361
Reading Comprehension Subtest, Form Q Level 2, CTBS	6[f]	226	31.48	45	5.7	247	33.30	52	6.2	1.82	7	.5	2.500**

[a] [b] Entries for percentile ranks (PR) and grade equivalents (GE) are from national norms tables
Fall norms not available for grade level 1
c-f: Grade equivalent at time of test administration: (c) 3.0; (d) 4.2; (e) 5.2; (f) 6.2
*N = 9 schools
**$p \leq .05$
***$p \leq .01$

TABLE 18

COMPARATIVE PERFORMANCE ON STANDARDIZED READING ACHIEVEMENT TESTS OF STUDENTS IN SCHOOLS WITH TYPICAL READING ACHIEVEMENT BELOW GRADE LEVEL (SITE TYPE B)*

Standardized Test	Grade Level	Fall 1973 Raw score N	mean	PR[a]	GE[a]	Fall 1974 Raw score N	mean	PR	GE	1973-74 Change Raw score mean	PR	GE	t
Listening Subtest, Form 12B, CPT	2	58	32.59	26	--	53	35.49	37	--	2.90	11	--	2.270**
Reading Subtest, Form 23B, CPT	3	60	24.20	29	--	56	27.62	40	--	3.42	11	--	2.785***
Reading Comprehension Subtest, Form Q Level 1, CTBS	4[b]	51	21.84	30	3.0	51	21.92	30	3.0	.08	0	.0	.042
Reading Comprehension Subtest, Form Q Level 2 CTBS	5[c]	48	19.10	32	3.7	52	21.35	37	4.0	2.25	5	.3	1.611
Reading Comprehension Subtest, Form Q Level 2 CTBS	6[d]	49	20.84	25	4.0	48	19.15	20	3.7	-1.69	-5	-.3	-1.152

[a]Entries for percentile ranks (PR) for CPT are from national norms tables and for CTBS are from large-city norms tables. Entries for grade equivalents (GE) are from national norms tables.

b-d: Grade equivalent at time of test administration: (b) 4.0; (c) 5.2; (d) 6.2

*N = 2 schools

**$p \leq .05$

***$p \leq .01$

percentile ranks or grade equivalents at Grades 3 and 5. Grade 4 experienced a grade equivalent gain of .1 and Grade 6, a gain of .5. In terms of grade equivalent scores, Grade 4 was .1 and Grade 6 was .5 below grade level in Fall 1973, while Grade 3 was .3 and Grade 5 was .1 above grade level at that time. In Fall 1974 the grade equivalent scores were at level for Grades 4 and 6 and again above level for Grades 3 (.3) and 5 (.1).

Site Type B Comparative Performance

Implementation groups achieved a higher raw score than preimplementation groups on four of the five comparisons. Raw score gains were statistically significant at the .05 level for the Listening subtest of the Cooperative Primary Test at Grade 2 and at the .01 level for CPT Reading subtest at Grade 3. There were percentile rank increases of 11 for both CPT subtests. At the three grade levels administered the CTBS, no change in derived scores occurred at Grade 4 (CTBS Level 1), a gain of 5 in percentile rank and .3 in grade equivalent occurred at Grade 5 (CTBS Level 2), and Grade 6 (CTBS Level 2) experienced a loss in both percentile rank (-5) and grade equivalent (-.3).

OBJECTIVE 6: COMPARATIVE PERFORMANCE OF INDIVIDUAL LEARNERS--STANDARDIZED READING ACHIEVEMENT TESTS

The CTBS test levels administered at each grade level must be considered when analyzing the longitudinal results for this objective. In the site type A schools, three grade level comparisons were performed: (1) grade level 3 with 4; (2) 4 with 5; and (3) 5 with 6. Students were administered CTBS Level 1 as third and fourth graders, Level 1 as fourth graders and Level 2 as fifth graders, and Level 2 as fifth and sixth graders. The grade level 4 with 5 comparison, then, involves a change from CTBS Level 1 to Level 2. Two grade level comparisons were performed in the site type B schools: (1) grade level 4 with 5; and (2) grade level 5 with 6. Students were administered CTBS Level 1 as fourth graders and Level 2 as fifth graders, and Level 2 as fifth and sixth graders. The grade level 4 with 5 comparison in the site type B schools, then, also involves a change from CTBS Level 1 to Level 2.

In computing the results for this objective it was not possible to use the grade equivalent gain scores from one grade level to the next given in Tables 17 and 18, because the year-to-year samples were not strictly identical. The 1973 CTBS data in Tables 17 and 18 contain scores for several students who were no longer in attendance at those schools in 1974. Similarly, the 1974 CTBS data in both tables contain scores for students who were not tested with CTBS in 1973, but were tested in 1974 to fill out a test sitting group. For example, in the site type A grade level 3 with 4 comparison, 233 students were administered the CTBS in Grade 3 in Fall 1973 and 229 students were administered the CTBS in Grade 4 in Fall 1974. Of these students only 199 were tested both years.

For the other two site type A comparisons the following numbers of students were administered the CTBS both years: 190 of the 223 students (Grade 4, 1973) and 234 students (Grade 5, 1974); and 221 of the 243 students (Grade 5, 1973) and 247 students (Grade 6, 1974). For the two site type B comparisons, the following numbers of students were administered the CTBS both years: 40 of the 51 students (Grade 4, 1973) and 52 students (Grade 5, 1974); and 29 of the 48 students (Grade 5, 1973) and 48 students (Grade 6, 1974).

Frequency distributions of grade equivalent change scores were plotted for each of the grade level comparisons using the data from only those students tested both years. The distributions, by site type and grade level comparison, are shown in Table 19 in terms of the number and percentage of students for six grade equivalent change intervals. In the grade level 3 with 4 comparison, 62.3% of the 199 students tested gained 1.1 or more years. A gain of 1.2 would be expected since the grade equivalent at the time of test administration in Grade 3 was 3.0 and in Grade 4 was 4.2. Of the 190 students in the grade 4 compared with 5 comparison, 45.2% gained 1.1 or more years. In the grade 5 compared to 6 comparison, 46.6% of 221 students gained 1.1 or more years. Across the three grade level comparisons for the site type A schools, 5.4% of the students experienced no change in grade equivalent scores, 27.9% a gain from a month to a year, 51.3% a gain of 1.1 or better, while 15.4% experienced a loss in grade equivalent.

For the site type B schools, 50% of the 40 grade level 4 with 5 comparison students gained 1.1 or more, while only 17.2% of the 29 grade level 5 with 6 comparison students gained 1.1 or more years. Across the two site type B comparisons, 7.2% of the students experienced no change in grade equivalent scores, 33.3% a gain from a month to a year, 36.2% a gain of 1.1 or better, while 23.2% experienced a loss in grade equivalent.

In order to test these data statistically, a standardized measure of an individual's relative standing from year to year was necessary. This was accomplished by utilizing the derived percentile ranks. The 1973 percentile ranks of individuals were derived from tables of national norms (large-city norms--site type B) on the basis of their CTBS raw score, test level, grade level, and time of year administered. Then, a projected raw score, based on the same percentile rank for the next grade level, was determined. The differences between the 1974 obtained raw score and the 1974 projected raw score from the 1973 percentile information were computed. These difference scores were then analyzed by grade level, using dependent t tests. The results are summarized in Table 19. The gains were greater than would be expected for the site type A grade level 3 with 4 and 5 with 6 comparisons. For the grade level 5 with 6 site type B comparison, there was a more significant decrease than would be expected over a one-year period.

OBJECTIVE 7: PERCENT MASTERS AFTER SKILL INSTRUCTION

Postassessment Following Instruction Forms (Appendix I) were completed and returned to the Center by the field test faculties of seven of the eight site type A schools that were monitored and by one of the two site type B schools. Data summaries from the forms are provided in Tables 20 and 21 respectively for the two site type groups.

TABLE 19

DISTRIBUTION OF GRADE EQUIVALENT CHANGES OF STUDENTS ADMINISTERED THE CTBS READING COMPREHENSION SUBTEST IN BOTH 1973 AND 1974

Site Type	Administration CTBS Level 1973	Administration CTBS Level 1974	Administration Grade Level 1973	Administration Grade Level 1974	Total N	Intervals of Grade Equivalent Changes: -1.1 or more N	%	-.1 to -1.0 N	%	0 N	%	.1 to 1.0 N	%	1.1 to 1.9 N	%	2.0 or more N	%	Projected Vs. Actual Raw Score Differences t
A--Schools where typical reading achievement is at or above grade level. (N = 9 schools)	1	1	3	4	199	6	3.0	8	4.0	11	5.5	50	25.1	64	32.2	60	30.1	3.876**
	1	2	4	5	190	15	7.8	28	14.7	4	2.1	57	30.0	40	21.0	46	24.2	-.806
	2	2	5	6	221	15	6.8	22	10.1	18	8.1	63	28.5	37	16.7	66	29.9	3.515**
Total					610	36	5.9	58	9.5	33	5.4	170	27.9	141	23.1	172	28.2	
B--Schools where typical reading achievement is below grade level. (N = 2 schools)	1	2	4	5	40	0	0.0	4	10.0	1	2.5	15	37.5	14	35.0	6	15.0	.833
	2	2	5	6	29	2	6.9	10	34.5	4	13.8	8	27.6	5	17.2	0	0.0	-2.513*
Total					69	2	2.9	14	20.3	5	7.2	23	33.3	19	27.5	6	8.7	

*p ≤ .05
**p ≤ .01

TABLE 20

PERCENT MASTERS AFTER SKILL INSTRUCTION IN SCHOOLS WITH TYPICAL READING ACHIEVEMENT AT OR ABOVE GRADE LEVEL (SITE TYPE A)*

Comprehension Skills	Number of Students	Number of Masters	Percent Masters
MAIN IDEA STRAND			
A1-Picture topics	290	264	91.0
B1-Paragraph topics	524	404	77.1
C1-Paragraph topics	463	402	86.8
D1-Topic sentences	567	474	83.6
E1-Main idea	282	221	78.4
F1-Main idea	301	176	58.5
Total	2427	1941	80.0
SEQUENCE STRAND			
A2-First or last event	492	348	70.7
B2-Before or after	1095	551	50.3
C2-Before or after	657	386	56.0
D2-Explicit sequence	422	355	84.1
E2-Explicit sequence	601	271	45.1
F2-Implicit sequence	152	139	91.4
G1-Implicit sequence	140	118	84.3
Total	3559	2168	60.9
REASONING STRAND			
A3-Synthesis	191	162	84.8
A4-Outcomes	395	278	70.4
B3-Outcomes	937	656	70.0
C3-Cause-effect	351	310	88.3
D3-Making deductions	187	172	92.0
E3-Making deductions	228	175	76.7
F3-Complex deductions	402	165	41.0
F4-Inferring from principles	278	198	71.2
G2-Natural deductions	35	28	80.0
G3-Induction	54	44	81.5
Total	3058	2188	71.5

(continued)

Table 20 (cont.)

Comprehension Skills	Number of Students	Number of Masters	Percent Masters
DETAIL STRAND			
B4-Detail	558	398	71.3
C4-Detail	238	204	85.7
C5-Negatives	398	314	79.0
D4-Clauses	374	287	76.7
D5-Passives	403	312	77.4
E4-Embedded parts	72	65	90.3
F5-Embedded parts and clauses	42	39	92.8
Total	2085	1619	77.6
CONTEXT STRAND			
D6-Context	236	214	90.7
E5-Context	386	281	72.8
G4-Context	56	54	96.4
Total	678	549	81.0
AFFIXES STRAND			
E6-Prefixes	504	357	70.8
F6-Suffixes	384	309	80.5
G5-Prefixes	120	82	68.3
Total	1008	748	74.2
Grand Total	12815	9213	71.9

*N = 7 schools

TABLE 21

PERCENT MASTERS AFTER SKILL INSTRUCTION IN A SCHOOL WITH TYPICAL READING ACHIEVEMENT BELOW GRADE LEVEL (SITE TYPE B)*

Comprehension Skills	Number of Students	Number of Masters	Percent Masters
MAIN IDEA STRAND			
A1-Picture topics	65	48	73.8
B1-Paragraph topics	33	27	81.8
C1-Paragraph topics	81	72	88.9
D1-Topic sentences	112	72	64.3
E1-Main idea	100	61	61.0
F1-Main idea	--	--	--
Total	391	280	71.6
SEQUENCE STRAND			
A2-First or last event	86	35	40.7
B2-Before or after	60	20	33.3
C2-Before or after	146	82	56.2
D2-Explicit sequence	190	115	61.6
E2-Explicit sequence	73	20	27.4
F2-Implicit sequence	--	--	--
G2-Implicit sequence	--	--	--
Total	555	272	49.0
REASONING STRAND			
A3-Synthesis	74	43	58.1
A4-Outcomes	85	48	56.5
B3-Outcomes	65	37	56.9
C3-Cause-effect	128	83	64.8
D3-Making deductions	72	49	68.1
E3-Making deductions	75	49	65.3
F3-Complex deductions	--	--	--
F4-Inferring from principles	--	--	--
G2-Natural deductions	--	--	--
G3-Induction	--	--	--
Total	499	309	61.9

(continued)

Table 21 (cont.)

Comprehension Skills	Number of Students	Number of Masters	Percent Masters
DETAIL STRAND			
B4-Detail	55	51	92.7
C4-Detail	115	83	72.2
C5-Negatives	101	66	65.3
D4-Clauses	143	67	46.8
D5-Passives	109	74	67.9
E4-Embedded parts	36	29	80.5
F5-Embedded parts and clauses	--	--	--
Total	559	370	66.2
CONTEXT STRAND			
D6-Context	113	79	69.9
E5-Context	31	13	41.9
G4-Context	--	--	--
Total	144	92	63.9
AFFIXES STRAND			
E6-Prefixes	58	8	13.8
F6-Suffixes	--	--	--
G5-Prefixes	--	--	--
Total	58	8	13.8
Grand Total	2206	1331	60.3

*N = 1 school

The strands, in descending order of total percent masters for the site type A schools, were Context (81.0%), Main Idea (80.0), Detail (77.6), Affixes (74.2), Reasoning (71.5), and Sequence (60.9). The grand total percent masters across all skills and strands was 71.9%. Each of the 36 Level A to G skills had been offered for instruction in the site type A schools, while the 25 skills encompassing Levels A to E had been offered for instruction in the site type B school. The strands, in descending order of total percent masters for the site type B school, were Main Idea (71.6%), Detail (66.2), Context (63.9), Reasoning (61.9), Sequence (49.0), and Affixes (13.8). The grand total percent masters was 60.3%.

OBJECTIVE 8: SKILL RETENTION

Two kinds of skill retention were assessed for Objective 8: retention from the instructional break-in testing and retention after instruction. Testing for break-in retention involved the retesting of students on skills they had mastered at their initial break-in test level. Since focused instruction on skills already mastered is not warranted, break-in retention was intended as a measure of retention without intervening focused skill instruction. Retention after instruction, on the other hand, involved the retesting of students on skills they had not mastered at break-in, but had mastered after receiving focused instruction. There was an intermission of almost eight weeks (56 days) or more between the time mastery had been assessed either at break-in or postassessment after instruction, and the Center retesting.

The data for the two kinds of skill retention in terms of number of students retested and percent retaining mastery are presented by strand and skill in Table 22 for the site type A schools and in Table 23 for the site type B schools. Several factors contributed to the failure to collect a more comprehensive data set for this objective: (1) the fixed monitoring visit schedule, (2) percent of students who mastered specific skills at break-in, (3) the eight-week time interval needed between mastery and retesting, (4) failure of some schools to enter dates on profile cards when skills were mastered, (5) alternating of Design skill areas for instruction, and (6) January 1974 startup for the intermediate grade levels.

Site Type A Schools

The strands, in descending order of retention of skills mastered at break-in, were Main Idea (92.9%), Detail (92.1), Reasoning (91.1), Sequence (89.1), and Context (87.5), for a grand total break-in retention rate of 90.9%. Affix skills were not retested. Students retained mastery after instruction for skills in the following strand order: Detail (93.3%), Main Idea (77.2), Sequence (74.3), Reasoning (71.5), and Affixes (50.0), for a grand total mastery after instruction retention rate of 73.0%. Context skills were not retested and there was little

TABLE 22

RETENTION OF SKILLS MASTERED AT BREAK-IN AND AFTER INSTRUCTION IN SCHOOLS WITH TYPICAL READING ACHIEVEMENT AT OR ABOVE GRADE LEVEL (SITE TYPE A)*

Comprehension Skills	Mastered at Break-in		Mastered after Instruction		Total	
	Number of Students Retested**	Percent Retaining Mastery***	Number of Students Retested**	Percent Retaining Mastery***	Number of Students Retested	Percent Retaining Mastery***
MAIN IDEA STRAND						
A1-Picture topics	--	--	--	--	--	--
B1-Paragraph topics	25	100.0	--	--	25	100.0
C1-Paragraph topics	20	90.0	--	--	20	90.0
D1-Topic sentences	29	100.0	7	85.7	36	97.2
E1-Main idea	27	96.3	20	70.0	47	85.1
F1-Main idea	26	76.9	17	82.3	43	79.1
Total	127	92.9	44	77.2	171	88.9
SEQUENCE STRAND						
A2-First or last event	43	93.0	11	81.8	54	90.7
B2-Before or after	49	83.6	27	74.1	76	80.2
C2-Before or after	56	83.9	32	71.9	88	79.5
D2-Explicit sequence	25	100.0	16	100.0	41	100.0
E2-Explicit sequence	--	--	23	56.5	23	56.5
F2-Implicit sequence	12	100.0	--	--	12	100.0
G1-Implicit sequence	--	--	--	--	--	--
Total	185	89.1	109	74.3	294	83.6
REASONING STRAND						
A3-Synthesis	21	100.0	--	--	21	100.0
A4-Outcomes	13	61.5	44	81.8	57	77.2
B3-Outcomes	25	88.0	42	85.7	67	86.5
C3-Cause-effect	48	95.8	--	--	48	95.8
D3-Making deductions	49	97.9	--	--	49	97.9
E3-Making deductions	23	100.0	21	80.9	44	90.9
F3-Complex deductions	--	--	37	37.8	37	37.8

(continued)

Table 22 (cont.)

Comprehension Skills	Mastered at Break-in		Mastered after Instruction		Total	
	Number of Students Retested**	Percent Retaining Mastery***	Number of Students Retested**	Percent Retaining Mastery***	Number of Students Retested	Percent Retaining Mastery***
REASONING (cont.)						
F4-Inferring from principles	23	69.5	--	--	23	69.5
G2-Natural deductions	--	--	--	--	--	--
G3-Induction	--	--	--	--	--	--
Total	202	91.1	144	71.5	346	82.9
DETAIL STRAND						
B4-Detail	25	80.0	--	--	25	80.0
C4-Detail	--	--	--	--	--	--
C5-Negatives	52	96.1	--	--	52	96.1
D4-Clauses	24	91.7	15	93.3	39	92.3
D5-Passives	25	88.0	--	--	25	88.0
E4-Embedded parts	27	100.0	--	--	27	100.0
F5-Embedded parts and clauses	12	91.6	--	--	12	91.6
Total	165	92.1	15	93.3	180	92.2
CONTEXT STRAND						
D6-Context	25	80.0	--	--	25	80.0
E5-Context	23	95.6	--	--	23	95.6
G4-Context	--	--	--	--	--	--
Total	48	87.5	--	--	48	87.5
AFFIXES STRAND						
E6-Prefixes	--	--	18	50.0	18	50.0
F6-Suffixes	--	--	--	--	--	--
G5-Prefixes	--	--	--	--	--	--
Total	--	--	18	50.0	18	50.0
Grand Total	727	90.9	330	73.0	1057	85.3

* N = 8 schools

** There was an intermission of at least eight weeks between the time of break-in testing or postassessment after instruction testing, and Center retesting.

*** Mastery criterion: 80%

TABLE 23

RETENTION OF SKILLS MASTERED AT BREAK-IN AND AFTER INSTRUCTION IN SCHOOLS WITH TYPICAL READING ACHIEVEMENT BELOW GRADE LEVEL (SITE TYPE B)*

Comprehension Skills	Mastered at Break-in		Mastered after Instruction		Total	
	Number of Students Retested**	Percent Retaining Mastery***	Number of Students Retested**	Percent Retaining Mastery***	Number of Students Retested	Percent Retaining Mastery***
MAIN IDEA STRAND						
A1-Picture topics	--	--	--	--	--	--
B1-Paragraph topics	41	87.8	24	75.0	65	83.1
C1-Paragraph topics	20	95.0	--	--	20	95.0
D1-Topic sentences	--	--	22	77.3	22	77.3
E1-Main idea	--	--	--	--	--	--
F1-Main idea	--	--	--	--	--	--
Total	61	90.2	46	76.1	107	84.1
SEQUENCE STRAND						
A2-First or last event	--	--	24	62.5	24	62.5
B2-Before or after	--	--	--	--	--	--
C2-Before or after	--	--	17	29.4	17	29.4
D2-Explicit sequence	--	--	23	82.6	23	82.6
E2-Explicit sequence	--	--	--	--	--	--
F2-Implicit sequence	--	--	--	--	--	--
G1-Implicit sequence	--	--	--	--	--	--
Total	--	--	64	60.9	64	60.9
REASONING STRAND						
A3-Synthesis	27	88.9	--	--	27	88.9
A4-Outcomes	27	48.1	--	--	27	48.1
B3-Outcomes	--	--	28	89.3	28	89.3
C3-Cause-effect	--	--	20	70.0	20	70.0
D3-Making deductions .	--	--	--	--	--	--

(continued)

Table 23 (cont.)

Comprehension Skills	Mastered at Break-in		Mastered after Instruction		Total	
	Number of Students Retested**	Percent Retaining Mastery***	Number of Students Retested**	Percent Retaining Mastery***	Number of Students Retested	Percent Retaining Mastery***
REASONING (cont.)						
E3-Making deductions	--	--	--	--	--	--
F3-Complex deductions	--	--	--	--	--	--
F4-Inferring from principles	--	--	--	--	--	--
G2-Natural deductions	--	--	--	--	--	--
G3-Induction	--	--	--	--	--	--
Total	54	68.5	48	81.2	102	74.5
DETAIL STRAND						
B4-Detail	21	95.2	20	85.0	41	90.2
C4-Detail	37	78.4	--	--	37	78.4
C5-Negatives	--	--	--	--	--	--
D4-Clauses	--	--	--	--	--	--
D5-Passives	--	--	--	--	--	--
E4-Embedded parts	--	--	--	--	--	--
F5-Embedded parts and clauses	--	--	--	--	--	--
Total	58	84.5	20	85.0	78	84.6
CONTEXT STRAND						
D6-Context	--	--	--	--	--	--
E5-Context	--	--	--	--	--	--
G4-Context	--	--	--	--	--	--
Total	--	--	--	--	--	--
AFFIXES STRAND						
E6-Prefixes	--	--	--	--	--	--
F6-Suffixes	--	--	--	--	--	--
G5-Prefixes	--	--	--	--	--	--
Total	--	--	--	--	--	--
Grand Total	173	81.5	178	73.0	351	77.2

* N = 2 schools

** There was an intermission of at least eight weeks between the time of break-in testing or postassessment after instruction testing, and Center retesting.

*** Mastery criterion: 80%

retesting for the Detail and Affix skills. Across both mastery at break-in and mastery after instruction, the retention rates in descending order were Detail (92.2%), Main Idea (88.9), Context (87.5), Sequence (83.6), Reasoning (82.9), and Affixes (50.0), for a grand total retention rate of 85.3%.

The mean number of days between mastery and retesting was 96.0 (the range was 63 to 146 days) for skills mastered at break-in and 87.1 (the range was 48 to 165 days) for skills mastered after instruction.

Site Type B Schools

The mastery at break-in retention rates by strand for these two schools were Main Idea (90.2%), Detail (84.5), and Reasoning (68.5), for a grand total retention rate of 81.5%. Retesting of Sequence, Context, and Affix skills mastered at break-in did not occur. Retention rates for skills mastered after instruction were Detail (85.0%--one skill), Reasoning (81.2), Main Idea (76.1) and Sequence (60.9), for a grand total retention rate of 73.0%. There was no retesting for Context and Affix skills. Across both mastery at break-in and mastery after instruction, the retention rates in descending order were Detail (84.6%), Main Idea (84.1), Reasoning (74.5), and Sequence (60.9), for a grand total retention rate of 77.2%. The mean number of days between mastery and retesting was 68.9 (the range was 68 to 70 days) for skills mastered at break-in and 77.2 (the range was 63 to 122 days) for skills mastered after instruction.

Main Idea and Detail skills had the best retention rates for both site type groups. Also, skills mastered at break-in had better retention rates than did skills mastered after instruction. The mastery after instruction retention rate for both site type groups was 73.0%.

SUMMARY

Field test objectives 4 to 8 were concerned with product effectiveness. Data reported were separated according to reading achievement level which was typically at or above grade in eight schools (site type A) and typically below grade level in two schools (site type B).

The evaluation design for objectives 4 and 5 utilized a cross-sectional comparison of the performance of learners of the same age/grade level in the field test sites in different academic years--immediately prior to installation (Fall 1973, preimplementation group) and near the end of the first year of implementation (Fall 1974, implementation group). Each age/grade level preimplementation group served as the control for the group of learners at the same age/grade level one year later.

Objective 4 pertained to comparative performance on the product's program-embedded tests. In the site type A schools, comparisons were positive for 22, or 79%, of the 28 Design objectives assessed. The raw score changes between the preimplementation and implementation groups were statistically significant for 9 of the 22 gains and for 2 of the 6 skills for which there were losses. Six, or 54.5%, of the 11 comparisons

for the primary levels (Grades 1 to 3) were positive while 16, or 94.1%, of the 17 comparisons for the intermediate levels (Grades 4 to 6) were positive. Comparisons favored the implementation groups in the site type B schools on 22, or 76%, of the 29 skills assessed. Raw score changes were statistically significant for 9 of the 22 gains and for 3 of the 7 losses. Six, or 54.5%, of the 11 primary level raw score change comparisons were positive while 16, or 88.9%, of the 18 intermediate level comparisons were positive.

Objective 5 was concerned with comparative performance on standardized reading achievement tests. The Listening and Reading subtests from the Cooperative Primary Tests (CPT) and Levels 1 and 2 of the Reading Comprehension subtest from the Comprehensive Tests of Basic Skills (CTBS) were used as the program-independent measure for comparing the implementation group with the preimplementation group. All of the six standardized test comparisons in the site type A schools favored the implementation groups. The raw score gain for the CPT Reading subtest administered at Grade 2 was significant at the .01 level, while gains in raw score means on the CTBS were achieved at Grades 3 to 6. Grade 4 experienced a grade equivalent gain of .1 and Grade 6 a gain of .5, with corresponding gains in percentile rank scores of 4 and 7, respectively. There were no changes in either grade equivalents or percentile ranks at Grades 3 and 5. The raw score gain at Grade 6 was significant at the .05 level.

Implementation groups achieved a higher raw score than preimplementation groups on four of the five comparisons for objective 5 in the site type B schools. The raw score gains for the CPT subtests were statistically significant at the .05 level at Grade 2 and at the .01 level at Grade 3. For the CTBS administered at Grades 4, 5, and 6, no change in derived scores occurred at Grade 4, a gain of 5 in percentile rank and .3 in grade equivalent occurred at Grade 5, while Grade 6 experienced a loss in both percentile rank (-5) and grade equivalent (-.3).

Objective 6 involved a longitudinal comparison of students who were administered the CTBS in both 1973 and 1974 (610 students in the site type A schools; 69 students in the site type B schools). Across the three grade level comparisons (grade level 3 with 4, 4 with 5, and 5 with 6) for the site type A schools, 5.4% of the students experienced no change in grade equivalent scores, 27.9% a gain from a month to a year, 51.3% a gain of 1.1 or better, while 15.4% experienced a loss in grade equivalent. In terms of projected versus actual raw score differences, the gains were greater than would be expected for the grade level 3 with 4 and 5 with 6 comparisons (significance level of .01 for both comparisons). Across the two site type B comparisons (grade level 4 with 5 and 5 with 6), 7.2% of the students experienced no change in grade equivalent scores, 33.3% experienced a gain of from a month to a year, 36.2% a gain of 1.1 or better, and 23.2% experienced a loss in grade equivalent. For the grade 5 with 6 site type B comparison, there was a more significant decrease (.05 level) for the projected versus actual raw score differences than would be expected over a one-year period.

Objective 7 was investigated to acquire information from field test faculties about skill mastery after instruction. Each of the 36 Levels A to G skills had been offered for instruction in the site type A schools;

across all strands and skills, the grand total percent masters after instruction was 71.9%. Instruction for the 25 skills encompassing Levels A to E had been offered in the one site type B school from which data had been received; the grand total percent masters after instruction for this school was 60.3%.

Retention rates for skills mastered at break-in as well as after instruction were computed for objective 8. There was an intermission of almost eight weeks (56 days) or more between the time mastery had been assessed either at break-in or for postassessment after instruction and the Center retesting for retention.

The grand total retention rate for skills mastered at break-in was 90.9% for the site type A schools and 81.5% for the site type B schools. The mean number of days between mastery and retesting for skills mastered at break-in was 96.0 and 68.9 respectively for site types A and B. The grand total retention rate for skills mastered after instruction was 73.0% for both site type groups, while the mean number of days between mastery and retesting for skills mastered after instruction was 87.1 for the site type A schools and 77.2 for the site type B schools. The overall retention rate across both mastery at break-in and mastery after instruction was 85.3% for the site type A schools and 77.2% for the site type B schools.

REFERENCES

Chester, R. D., Askov, E., Hudson, B., & Otto, W. The Wisconsin Design for Reading Skill Development: Teacher's planning guide--Comprehension. Minneapolis: National Computer Systems, 1974.

Comprehensive Tests of Basic Skills. Monterey: CTB/McGraw-Hill, 1968.

Cooperative Primary Tests. Princeton: Education Testing Service, 1965.

Otto, W. & Askov, E. The Wisconsin Design for Reading Skill Development: Rationale and guidelines. Minneapolis: National Computer Systems, 1974.

APPENDIX A

STATEMENT OF SKILLS AND OBJECTIVES
FOR THE WISCONSIN DESIGN FOR READING SKILL DEVELOPMENT:
COMPREHENSION 1973-74 SMALL-SCALE FIELD TEST

Statement of Skills and Objectives for Comprehension*

Small-Scale Field Test Edition

LEVEL A

1. Identifies a topic: pictures (11i) **

   Objective: The child identifies the topic of a picture.

2. Determines sequence: first or last event (2)

   Objective: After hearing a story, the child selects the one of four pictures that depicts the first or last event in the story.

3. Uses logical reasoning

   a. Synthesizes information (3)

      Objective: The child selects the one picture that depicts the two-event activity described in an oral sentence.

   b. Predicts outcomes (4)

      Objective: The child selects the one picture that depicts the outcome of an activity described in an oral sentence.

LEVEL B

1. Identifies a topic: paragraphs (1)

   Objective: The child identifies the topic of a written-oral selection.

2. Determines sequence: event before or after (2)

   Objective: After hearing a story, the child selects the one of three pictures that depicts the event occurring immediately before or after another pictured event in the story.

3. Uses logical reasoning: predicts outcomes (3)

   Objective: The child selects the one picture that depicts the outcome of a three-event activity described in an oral sentence.

* Objectives apply to the child's comprehension of written material at Levels C-G. Related prerequisite objectives at Levels A and B are based on pictures, orally presented materials, and written materials that are read aloud to the child (written-oral).

** Number in circle refers to skill number. An i following the skill number indicates that assessment must be individually administered.

4. Reads for detail (4)

Objective: The child answers questions about detail found in a written-oral selection containing sentences written in the active voice.

LEVEL C

1. Identifies a topic: paragraphs (1)

Objective: The child identifies the topic of a written selection.

2. Determines sequence: event before or after (2)

Objective: After hearing a story, the child selects the one of three statements that describes the event occurring immediately before or after another event described in a statement taken from the story.

3. Uses logical reasoning: determines cause-effect relationships (3)

Objective: The child determines whether the relationship between two statements is cause-effect.

4. Reads for detail

a. Notes detail in sentences in active voice (4)

Objective: The child answers questions about detail found in a paragraph containing sentences written in the active voice.

b. Interprets negative sentences (5)

Objective: The child determines whether a restatement of a positive or negative sentence within a paragraph is true or false.

LEVEL D

1. Identifies a topic sentence (1)

Objective: The child identifies the topic sentence of a paragraph.

2. Determines sequence: explicit relationships (2)

Objective: Given one or two sentences containing two or three events with explicit sequential relationships, the child determines the order of events.

NOTE: Explicit sequential relationships are identified by specific cue words (e.g., *next, finally*).

3. Reasons deductively (3)

Objective: Given a major and minor premise, the child determines whether a given conclusion is correct.

4. Reads for detail

a. Interprets sentences with clauses at the beginning or end (4)

Objective: The child determines whether a restatement of a paragraph-embedded sentence that has an introductory or terminal subordinate clause is true or false.

b. Interprets sentences written in the passive voice (5)

Objective: The child determines whether a restatement of a sentence written in the passive or active voice within a paragraph is true or false.

5. Uses context clues: unknown words (6)

Objective: The child uses the contextual devices of direct description and cause-effect to determine the meaning of an unknown word in a sentence.

LEVEL E

1. Identifies a main idea: paragraph (1)

Objective: The child identifies the main idea of a paragraph with no topic sentence.

2. Determines sequence: multiple explicit relationships (2)

Objective: Given three to six sentences containing four to six events stated with an explicit sequential relationship, the child determines the order of events.

3. Reasons deductively (3)

Objective: Given two or three premises, either in or out of order, the child determines whether a given conclusion is correct.

4. Reads for detail: sentences with one centrally embedded part (phrase or clause between subject and verb) (4)

Objective: The child determines whether a restatement of a paragraph-embedded sentence that has one centrally embedded part is true or false.

5. Uses context clues: unknown words (5)

Objective: The child uses the contextual devices of direct description and contrast to determine the meaning of an unknown word in a sentence.

6. Determines the meaning of prefixes (6)

Objective: The child determines the meaning of the prefixes *anti-*, *dis-*, *fore-*, *in-*, *mid-*, *mis-*, *mono-*, *non-*, *post-*, *pre-*, *re-*, *semi-*, *sub-*, *super-*, and *uni-*, when used with a known word in context.

LEVEL F

1. Identifies a main idea: two paragraphs (1)

Objective: The child identifies the main idea of a passage containing two paragraphs, either or both of which may have topic sentences.

2. Determines sequence: implicit relationships (2)

Objective: The child determines the order of events from scrambled statements which together make a story with implicit sequential relationships.

NOTE: Implicit sequential relationships are identified from the meaning conveyed in the passage.

3. Uses logical reasoning

a. Reasons deductively: three premises (3)

Objective: Given two or three premises, either in or out of order, the child determines whether a given conclusion is correct, incorrect, or indeterminable.

b. Recognizes an instance of a principle (4)

Objective: Given a principle, the child determines whether specific events are instances of that principle.

4. Reads for detail: sentences with one centrally embedded part and an introductory or terminal clause (5)

Objective: The child determines whether a restatement of a paragraph-embedded sentence that has one centrally embedded part and an introductory or terminal clause is true or false.

5. Determines the meaning of suffixes (6)

Objective: The child determines the meaning of the suffixes *-able, -an, -ee, -eer, -en, -ess, -fy, -hood, -ist, -itis, -less, -let, -or,* and *-ward,* when used with a known word in context.

LEVEL G

1. Orders events along a time line (1)

Objective: Given a paragraph with implicit sequential relationships, the child places the events in the correct sequence on a time line.

2. Uses logical reasoning

a. Reasons deductively (2)

Objective: The child identifies and solves logical arguments in context.

b. Reasons inductively (3)

Objective: The child infers a general principle from a selection in which specific pieces of information supporting that general principle are given.

3. Uses context clues: obscure meanings of familiar words (4)

Objective: The child determines the obscure meaning of a familiar word in context by using the devices of cause and effect, direct description, and contrast.

4. Determines the meaning of prefixes (5)

Objective: The child determines the meaning of the prefixes *ante-, counter-, de-, en-, inter-, intra-, mal-,* and *trans-,* when used with a known word in context.

APPENDIX B

SCHOOLS PARTICIPATING IN THE WISCONSIN
DESIGN FOR READING SKILL DEVELOPMENT:
COMPREHENSION 1973-74 SMALL-SCALE FIELD TEST

SCHOOL NAME	LOCATION	SETTING	ORGANIZATION	DESIGN ELEMENTS*
Columbus Elementary	Appleton, WI	small city	multiage units	WA**
McKinley Elementary	Appleton, WI	small city	multiage units	WA, SS
Locust Lane Elem.	Eau Claire, WI	small city	multiage units	WA, SS
Whitney Elementary	Green Bay, WI	small city	multiage units	WA
Victor Haen Elem.	Kaukauna, WI	small city	within grade units	WA
McFarland Elem. and Conrad Elvehjem Middle School	McFarland, WI	suburban or fringe	multiage units	WA, SS
Green Bay Avenue Elementary	Milwaukee, WI	urban	self-contained classrooms	WA
Philipp Elementary	Milwaukee, WI	urban	self-contained classrooms	WA, SS
Oregon Elementary Middle School	Oregon, WI	suburban or fringe	within grade units multiage units	WA, SS
Fairmount Elem.	Golden, CO	suburban	self-contained classrooms	WA, SS

* In addition to Comprehension at the time of the field test
** WA = Word Attack; SS = Study Skills

APPENDIX C

FIELD TEST MEMORANDUM
OF AGREEMENT

MEMORANDUM OF AGREEMENT

between

The Wisconsin Research and Development Center for Cognitive Learning

and

_____

The Wisconsin Research and Development Center for Cognitive Learning (Center) and _____ (District) agree cooperatively to field test during the 1973-74 academic year instructional materials for the Comprehension element of the Wisconsin Design for Reading Skill Development. The field test will be conducted in _____ _____ School(s) with all children in their first through seventh (Gr. K-6) years of school. The Center agrees to supply all materials required by the School(s).

A. The Center will provide at no cost to the District:

1. All field test materials for teachers and students.*
2. Test scoring service for the break-in testing of all participating pupils.
3. Tests associated with the gathering of criterion data.
4. An inservice program for two representatives from each school. The program will 1) acquaint them with the field test materials and other instructional materials, 2) establish field test purposes, 3) provide information regarding implementation of the Comprehension element and 4) provide assistance relative to instructional methods and techniques. It will involve one full day in Fall, 1973, and will be conducted at the mutual convenience of the School and the Center. Provisions for the inservice time will be shared by the District and the Center so that conveniently available school time can be utilized wherever possible and wherever it is not possible the Center will reimburse the representatives for their time. The rate of reimbursement will be at the hourly rate for professional staff established in the District salary schedule.

*Such materials are provided for the exclusive use of the participating school and may not be reproduced for any purpose other than field testing at that school.

5. Consultant services as required. However, the school system should recognize that the purpose of the field test is to ascertain whether the product can be used in a system with the support only of the local central staff. If Center consultant services are required to any great extent, the field test could be considered unsuccessful. This is not meant to imply that we do not wish to know of gaps in the existing materials; we simply wish to indicate that the system is expected to supply the resources at hand normally provided in support of any reading program.

6. Feedback to school systems regarding the field test results in the form of a written report and oral reports. Oral reports will be provided periodically at the mutual convenience of the school and the Center. An oral report will be available by January, 1975, with a written report to follow by January, 1976.

B. The District will ensure that each participating school:

1. Implements the Comprehension element according to the guidelines established in the materials and reviewed in the inservice program.

2. Provides all non-Design instructional materials necessary for effective implementation of the Comprehension element.

3. Makes available at least one half-day of staff inservice for participating teachers. This inservice will be conducted by the local leaders, who will have participated in the Center-led inservice. New teachers will receive additional orientation to the Design in its entirety.

4. Engages all eligible K-6 pupils and staff in the participating school in the program.

5. Devotes two hours weekly in each school to the teaching of Comprehension. It is understood that the time devoted to Comprehension is not necessarily additional curriculum time. The Comprehension skills are projected to be integrated into existing curriculum areas. Instruction will be based on the continuous progress of the child without respect to grade or "level" designations.

6. Provides up to 2 hours of pupil time for the gathering of criterion data yearly, provides teachers to administer such tests, apprises the Center of the local testing program and shares with the Center any intelligence or achievement data from the participating school gathered through the system's testing program.

7. Coordinates the school system's testing program with the Center's testing program.

8. Pays any shipping costs for sending tests to the Center for processing.

9. Informs the Center in advance of school boundary changes affecting over 10% of the enrollment of a given school so that termination of the test at the affected grade levels can be jointly considered.

C. The term of this agreement will be from the time it is fully executed until June 30, 1974. However, the Center reserves the right to gather follow-through data until December, 1974.

Accepted by:

William R. Bush, Deputy Director
Wisconsin Research and Development
Center for Cognitive Learning

Date

Agree to:

(Signed)

(Title)

(District)

(Date)

APPENDIX D

AGENDA FOR COMPREHENSION
FIELD TEST INSERVICE

AGENDA

COMPREHENSION FIELD TEST INSERVICE

September 20, 1973
R & D Center, 1025 West Johnson Street
Conference Area I - Rooms 247-253

Registration and Coffee	8:30-9:00
Introductions	9:00-9:10
Greetings	9:10-9:30
Skills: Rationale for Selection	9:30-10:00
Comprehension Strands - Sessions I and II Session I Session II (Sessions I and II will run concurrently. Those in Session I at 10:00 will go to Session II at 11:00 and vice versa.)	10:00-10:45
Coffee Break	10:45-11:00
Comprehension Strands - Sessions I and II repeated	11:00-11:45
Luncheon - Union South, Room 211 Address: "Common Sense in the Teaching of Reading"	12:00-1:15
Field Test Expectations	1:30-2:00
Assessment	2:00-2:30
Local Inservice Plans	2:30-2:45
Scheduling for Instruction Group A Group B Group C Group D (Groups A-D will run concurrently.)	2:45-3:15
Study Skills Report	3:15-3:45
Inservice Evaluation	3:45-4:00

APPENDIX E

SECOND VISIT INTERVIEW GUIDE: PRINCIPAL OR READING SPECIALIST, AND UNIT LEADER OR TEACHER

Interview Guide

Comprehension Small-Scale Field Test
Second Visit
Principal or Reading Specialist

School_____ Date_____

Interviewee_____ Monitor_____

Position_____

INSERVICE

1. Did you feel that the R & D Center inservice provided sufficient information and materials about the Comprehension program to conduct your local inservice?

2. If not, how could the Center inservice have been more helpful? (Be specific.)

3. Were there weaknesses or problems associated with your local inservice? If yes, please specify their nature; for example, was it long enough, complete enough?

4. Have the R & D Center requisites for effective implementation, field test objectives, and schedule of field test activities been communicated to your staff?

5. How much time has been or will be provided for keying local materials to the teacher's resource file?

   Inservice_____

   Other_____

6. Has any specific plan for keying materials been developed?

7. Who is, or will be, involved in the keying?

8. Is the Compendium Sampler being utilized by your staff?

SCHOOL READING PROGRAM

9. What is the overall, official time allotment for reading in your school (minutes per day or minutes per week)?

_____ Grade 1 _____ Grade 3 _____ Grade 5

_____ Grade 2 _____ Grade 4 _____ Grade 6

10. Is language arts instruction included in the time allotted to reading, or does it have a time block of its own?

Comment:

11. What instructional areas of the Wisconsin Design are not included in the reading or language arts time allotment? For example, is time for Word Attack, Comprehension, and Study Skills added on?

Comment:

12. Please describe the non-Design aspects of your Grades 1-6 reading program. Check all that apply and circle the grade level(s) to which they apply.

School Reading Program		Grade Levels
_____a.	Multitext Publishers_____	a. 1 2 3 4 5 6
_____b.	One basal text (with supplementary texts) Publisher_____	b. 1 2 3 4 5 6
_____c.	Basal - linguistic orientation Publisher_____	c. 1 2 3 4 5 6
_____d.	Individualized (text or nontext)	d. 1 2 3 4 5 6
_____e.	Language experience	e. 1 2 3 4 5 6
_____f.	Other_____	f. 1 2 3 4 5 6

Comment:

GENERAL

13. Do you have enough materials to implement the Comprehension program?

How much (dollars) has been spent? _____

14. What have you done about teachers new to the Design this year?

How many teachers are new to the staff and at what grade levels?

How many came from schools already using the Design?

15. What do you see as the major obstacles to getting the field test off the ground?

Interview Guide

Comprehension Small-Scale Field Test
Second Visit
Unit Leader or Teacher

School _____ Date _____

Interviewee _____ Monitor _____

Position _____

INSERVICE

1. Did your local Comprehension inservice provide you with sufficient information and preparation time so that skill group instruction could have begun soon afterward?

2. If not, how could the inservice have been of more help to you?

MATERIALS

3. Check all of the following statements that are true:

_____a. Time for keying local materials was provided during our local inservice.

_____b. The Compendium Sampler was an aid in keying.

_____c. The R & D Center had already keyed basals or texts that I use.

_____d. I key materials as I'm teaching, or preparing to teach, a skill.

_____e. I don't think that accurate keying can be done until I've taught and become familiar with a skill.

_____f. Statement e is especially true for the reasoning and detail strands.

_____g. Keying is more easily and accurately done if I first look over the teacher-directed activities for a skill.

_____h. The Teacher's Planning Guide provides sufficient how-to-do-it information for implementation of the Comprehension program. (If you did not check this item, please use a Comment Card and be specific about the TPG's deficiencies.)

_____i. The Addenda provides an adequate description of the strands.

Comments:

IMPLEMENTATION

4. How many different skill groups are you usually teaching at the same time? _____

5. Who decides which skills you teach next? _____

6. On what basis is the decision made (e.g., profile card information)?

_____

7. Is the decision based on your own homeroom's skill needs, or on the basis of a larger group of children? _____

_____

8. What usually happens to the lowest 10% of the readers?

_____a. special group formed to accommodate them

_____b. work with higher group above their ability level

_____c. often don't fit and do independent work

_____d. have tutoring (one-on-one) at the appropriate level

_____e. work with younger children who share their common skills needs

9. What usually happens to the highest 10% of the readers?

_____a. special group formed to accomodate them

_____b. work with lower group below their ability level

_____c. often don't fit and do independent work

_____d. act as tutors

_____e. work with older children who share their common skill needs

10. Did you select one of the scheduling for instruction plans offered by the R & D Center?_____ If so, which one? _____

_____

If not, what schedule did you use?

11. What skill(s) did you teach during the last skill group cycle?

_____

To what age children? _____

12. How many days did your skill group last? _____

How many minutes did it meet each day? _____

13. Check all of the following statements that are true:

_____a. My skill group was formed by skewering the profile cards.

_____b. Only normasters received instruction.

_____c. I used the strand concept and taught the same skill at more than one level.
Comment:

_____d. The teacher-directed activities in the teacher's resource file sufficiently supported instruction.

_____e. I had to supplement the TRF.

_____f. My students enjoyed doing the activities from the TRF.

_____g. The activities in the TRF were too difficult or frustrating for some of my students. (Be specific with a Comment Card.)

_____h. The skill group should have lasted longer (or been shorter).

_____i. I postassesssed after instruction.

_____j. I was pleased with the number of students mastering the skill after instruction.

_____k. I have confidence in the assessment program.

Comments:

14. Do you use, or do you think you will use, the growth charts?_____

15. Are the profile cards kept up-to-date? _____

APPENDIX F

THIRD VISIT INTERVIEW GUIDE: PRINCIPAL OR READING SPECIALIST, AND UNIT LEADER OR TEACHER

Interview Guide

Comprehension Small-Scale Field Test
Third Visit
Principal or Reading Specialist

School_____ Date_____

Interviewee_____ Monitor_____

Position_____

1. Are all classroom teachers (Grades 1-6) in your building teaching the Design's Comprehension skills? _____

2. Do kindergarten children receive instruction in word attack skills?

_____ Did K teachers start Level A Comprehension this semester? _____

3. Does your school have instructional aides who are involved in teaching the Comprehension skills? _____

At what grade levels? _____

Which of the following responsibilities are they usually assigned with regard to Comprehension skill instruction?

_____supervise students involved in independent activities

_____assist teachers in skill instruction

_____teach skill groups

_____prepare materials for teachers to use

_____key materials for teachers to use

_____form skill groups (skewer cards, etc.)

_____administer tests

_____score tests

_____notch profile cards

Other? _____

4. For the field test report we need to know when (month) Comprehension skill instruction began for:

Grade	Month
1	_____
2	_____
3	_____
4	_____
5	_____
6	_____

5. Have any teachers changed either their implementation plan or schedule since they first started? _____

If yes, please specify the changes, when (month) they occurred, at which grade level(s), and the number of teachers involved.

6. How would you rate teacher reaction to the Design's comprehension program?

	REACTIONS			
STAFF	Negative	Lukewarm	Positive	Enthusiastic
Most	_____	_____	_____	_____
Some	_____	_____	_____	_____
A few	_____	_____	_____	_____

Comments?

7. What specific recommendations would you give to the Center for revising the Comprehension program?

Questions 8-13 should be answered only by those schools that are implementing Study Skills in addition to Word Attack and Comprehension.

We are interested in learning about overall Design implementation in schools that are now implementing three of the elements--Word Attack, Study Skills, and Comprehension. Some schools, for example, have a "skills period" every day during which staff members alternate cycles of Word Attack and Comprehension, or cycles of Comprehension and Study Skills, etc. Some staff members do not form skill groups for Study Skills, although they provide instruction in the Study Skills. Questions 8-13 deal with management of the Design when staff members are implementing more than one element.

8. On the chart below please check, by grade level, all Design elements for which there are formal skill groups (students are grouped on the basis of non-mastery, receive instruction, and are postassessed.)

DESIGN ELEMENTS

GRADE LEVEL			Study Skills		
	Word Attack	Comprehension	Maps	Graphs-Tables	References
K	_____	_____	____	_____	_____
1	_____	_____	____	_____	_____
2	_____	_____	____	_____	_____
3	_____	_____	____	_____	_____
4	_____	_____	____	_____	_____
5	_____	_____	____	_____	_____
6	_____	_____	____	_____	_____

9. We would like to know more about the lines that you left blank on the chart in question 8. For example, did you leave a line blank because no instruction is being offered in that element? Or did you leave it blank because teachers are offering skill instruction in that element, but not in formal skill groups?

   Please go back to the chart and enter a "1" or a "2" on the lines that you left blank.

   1 = no instruction is being offered

   2 = instruction is offered, but not in formal skill groups

10. Do any grade levels or units alternate cycles of skill instruction in one Design element with another? _____

    For example:

    Alternate cycles of Study Skills, Word Attack, and Comprehension instruction? _____

    If "yes", at what grade levels? _____

    Alternate Comprehension and Study Skills? _____

    If "yes", at what grade levels? _____

    Alternate Comprehension and Word Attack? _____

    If "yes", at what grade levels? _____

    Alternate Word Attack and Study Skills? _____

    If "yes", at what grade levels? _____

11. Are any grade levels or units grouping so that a student receives skill instruction every day in Word Attack, Comprehension, and Study Skills?

    _____

Your school has been involved in the Design field test since 1970. Staff members at your school are implementing more of the Design's elements (that is, Word Attack, Study Skills, and Comprehension) than most other schools. They have also been implementing for a longer period of time than most other schools. In view of your experience and understanding of the program now, please answer questions 12 and 13 which deal with projections about overall Design implementation.

12. Is there enough time in a school day to schedule formal skill instruction in Word Attack, Study Skills, and Comprehension without using alternate cycles? _____

13. If you answered "yes" to question 12, is it reasonable to ask teachers to form skill groups so that a student is in a Word Attack group, a Study Skills group, and a Comprehension group regularly (without alternating cycles)? _____

    If "no", what is reasonable to ask teachers to do?

    _____

Interview Guide

Comprehension Small-Scale Field Test
Third Visit
Unit Leader or Teacher

School _____ Date _____

Interviewee _____ Monitor _____

Position _____

INTERVIEWEE: Please mark your answers ahead of time to question 20 (printed on green). You may wish to familiarize yourself with questions 1-19 which will be asked during the interview. However, it is not necessary for you to write in answers to questions 1-19.

1. From which of the following groups are your Comprehension skill groups formed?

_____ the whole grade level

_____ the whole unit

_____ my homeroom

_____ my developmental reading groups

Other? _____

2. Who forms the skill groups?

_____ unit staff

_____ unit leader

_____ instructional aide

_____ homeroom teacher

_____ developmental reading teacher

Other? _____

3. Are skill groups formed on the basis of information from profile cards or charts? _____ If not, on what basis are they formed?

_____

Unit Leader/ Teacher
Page 2

4. What usually happens to a student when he is already a master of the skill(s) you or your unit are teaching?

_____ he does independent work in _____

_____ he is grouped for instruction on a skill he has mastered

_____ he is grouped for instruction on a skill he has not mastered with children from another unit or grade level

Other? _____

5. How many Comprehension skill groups are you usually teaching?

_____ one group

_____ two groups

_____ three groups

Other _____ How many skills are you usually teaching to each group? _____

6. How long do your Comprehension skill groups usually last?

_____days for _____minutes a day

7. How often do you usually regroup for Comprehension skill instruction?

_____ every two weeks

_____ every three weeks

_____ every four weeks

_____ every six weeks

Other? _____

8. Do you alternate days or weeks of instruction for:

Word Attack and Comprehension? _____

Comprehension and basal? _____

Comprehension and something else? _____

Other? _____

9. For any skill, do all the students in your group(s) receive the same instruction, or do you subgroup within a group, using different materials with the subgroups?

10. Do masters as well as nonmasters sometimes receive instruction in a skill?

_____ At what times? _____ _____

11. Have you used the strand concept in skill instruction--giving instruction in a skill at more than one skill level?

12. In teaching the Design's Comprehension skills, how much do you use each of the materials listed below?

	NONE	LITTLE	SOME	MUCH
teacher-made materials (games, worksheets, etc.)	____	____	____	____
activities from the Comprehension Teacher's Resource Files (TRF)	____	____	____	____
basal workbook pages you like	____	____	____	____
commercial materials that were keyed for the TRF by the R & D Center	____	____	____	____
commercial materials that were keyed for the TRF by your school staff	____	____	____	____
Other _____	____	____	____	____

13. Have you added materials to folders in the teacher's resource files?

_____

14. Do you test for mastery after instruction? _____

Which test form do you use? _____ Form I _____ Form II

15. Are the Comprehension profile cards or charts kept up-to-date? _____

16. Do new students receive break-in testing for Comprehension? _____

How soon are they usually tested after they've enrolled? _____

17. Have any students finished a skill level since break-in testing? _____

Did you use pretesting strategies with these students to see what skills they may have acquired at the next level? _____

If yes, how did the pretesting strategies work? _____

_____

18. Who takes responsibility for following an individual student's skill progress? _____

19. What specific recommendations would you give to the Center for revising the Comprehension program?

20. Please rate how you feel about statements a-p.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. The Wisconsin Design has identified skills that students need for reading comprehension.	____	____	____	____	____
b. Students do not need instruction in comprehension skills they've already mastered.	____	____	____	____	____
c. Mastery of the objectives in the Main Idea strand is essential for reading comprehension.	____	____	____	____	____
d. To effectively teach comprehension skills, a basal reader program is needed along with the Wisconsin Design.	____	____	____	____	____
e. Mastery of the objectives in the Affixes strand is essential for reading comprehension.	____	____	____	____	____
f. Mastery of the objectives in the Reasoning strand is essential for reading comprehension.	____	____	____	____	____
g. Using informal assessment (teacher judgment or observation) is as effective as formal assessment (tests) for judging skill mastery.	____	____	____	____	____
h. Spending extra time to teach the Design's comprehension skills is worthwhile.	____	____	____	____	____
i. The tests (Forms I and II) measure the comprehension behavioral objectives.	____	____	____	____	____
j. The Wisconsin Design alone is an effective program for teaching comprehension skills.	____	____	____	____	____

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
k. Mastery of the objectives in the Context strand is essential for reading comprehension.	____	____	____	____	____
l. The Wisconsin Design enables me to teach comprehension skills better than any other program I've used.	____	____	____	____	____
m. Mastery of the objectives in the Sequence strand is essential for reading comprehension.	____	____	____	____	____
n. Students can apply the comprehension skills they've mastered.	____	____	____	____	____
o. Mastery of the objectives in the Detail strand is essential for reading comprehension.	____	____	____	____	____
p. Teachers should help students apply the comprehension skills they have mastered.	____	____	____	____	____

APPENDIX G

FOURTH VISIT INTERVIEW GUIDE: PRINCIPAL OR READING SPECIALIST, AND UNIT LEADER OR TEACHER

Interview Guide

1973-74 Comprehension Small-Scale Field Test
Fourth Visit
Principal or Reading Specialist

School _____ Date _____

Interviewee _____ Interviewer _____

Position _____

1S. Do you have any new staff members this year?

_____ no

_____ yes

a. At what grade levels? _____

b. What kind of inservice did they receive? _____

_____

2S. Has there been any staff reorganization this year? For example,

_____(a) Teachers assigned to a different grade level this year

_____(b) Units reorganized (multiunit school)

_____(c) Different unit leaders (multiunit school)

_____(d) Other _____

If any of a-d are true, explain the changes: _____

_____

_____

_____

_____No staff reorganization

3M. During the last year were commercial materials ordered specifically for use with the Design's Comprehension program?

_____ Yes

_____ No

5M. During the summer, or since school has started, was or has any specific time been set aside for keying or preparation of teacher-made materials for the Comprehension program?

_____ No, specific time not set aside; keying, etc. is ongoing.

_____ Yes, specific time set aside. (Explain: Funded summer project? Summer inservice time? Fall inservice time?)

_____

_____

6I. Has Design Comprehension skill instruction already started at all grade levels or in all units (multiunit schools)?

_____ Yes

How long after school has started do teachers usually wait before beginning Design skill instruction? _____

_____

_____ No. Who (grade levels or units) and when do they plan to start?

_____

7I. Do you know whether any teachers or units have altered last year's strategy regarding the implementation of Comprehension?

_____ Don't know

_____ All teachers or units implementing the same as last year

_____ Some teachers or units implementing differently from last year

For whom different (what grade levels or units) and how different (changes in: skill groups-composition and number of days they meet; time block taught; time spent each day, etc.)

_____

_____

_____

_____

8I. How did this year's grade level 1 children "break-in" for the Design's Comprehension program?

_____(a) Don't know

_____(b) They're not in the program yet

_____(c) They received break-in testing in September

_____(d) They started the program in kindergarten:

_____(1) administered booklets for break-in, received instruction, postassessed
_____(2) no pretest (break-in), all received instruction, all postassessed
_____(3) no pretest (break-in), all received instruction, no posttest

_____Other (include any variations in above categories) _____

_____

Interview Guide

1973-74 Comprehension Small-Scale Field Test
Fourth Visit
Unit Leader or Teacher

School _____ Date _____

Interviewee _____ Interviewer _____

Position _____

NOTE: If interviewee teaches grade level 1 or is involved with grade level 1 students, ask question 8 from Principal/Reading Specialist Interview Guide.

1I. Can you briefly review how you were implementing the Design's Comprehension program last year? (how often regroup; how many weeks did skill groupings last; how many minutes groups met each day; did you "alternate cycles;" groups formed within homeroom or unit, across homerooms; taught in isolation or in reading group, etc.)

_____

_____

_____

_____

2I. Are you continuing with last year's implementation plan, or have you altered it?

_____(a) Continuing with last year's plan

Have you started Comprehension skill instruction? _____

Approximately when (week of school) did you start? _____

_____(b) Altered last year's implementation plan

What are you doing differently? _____

_____

_____

What caused you to change? _____

_____

_____

Have you started Comprehension skill instruction? _____

Approximately when (week of school) did you start? _____

3I. Have you noticed whether any students have experienced skill loss or skill gain (Comprehension skills) over the summer?

_____ Haven't really noticed or looked for it

_____Looked. How did you check for it? _____

_____

What did you find?_____Skill loss _____Skill gain

For any skills in particular?_____

If skill loss, what did you do about it?_____

_____

4T. How have you placed this Fall's new students into the Comprehension program?

_____(a) New students receiving skill instruction; no pretesting or battery testing planned

_____(b) Break-in testing via pretesting strategies. How was level to administer determined? _____

_____(c) Break-in testing via battery. How was level to administer determined? _____

_____Other: _____

_____

5. How do you feel about continuing with the Design's Comprehension program (negative, lukewarm, positive, enthusiastic)?

_____

Are you experiencing any particular problems? _____

_____

APPENDIX H

COMPREHENSION COMMENT CARD

Comprehension

Comment Card

Date _____

Name _____

School _____

Material affected (be specific, e.g., include page number, level, skill number).

Question/Problem

Do you have any recommendations?

Success

APPENDIX I

POSTASSESSMENT FOLLOWING INSTRUCTION FORM

NOTE: This questionnaire should be filled out throughout this school year by each teacher who is participating in the Comprehension small-scale field test. Return of this questionnaire to the R & D Center will be requested in May, 1974.

COMPREHENSION SMALL-SCALE FIELD TEST

School _____
(fill in school name)

Directions: Use a different line for each skill that you teach and postassess. Enter the information requested under each column heading.

POSTASSESSMENT FOLLOWING INSTRUCTION

Skill		Date	Number in	Result	
Level	Number	Assessed	skill group	Masters	Nonmasters
Example: A	2	10-26-73	20	16	4

National Evaluation Committee

Francis S. Chase, Chairman
Emeritus Professor
University of Chicago

Helen Bain
Past President
National Education Association

Lyle Bourne
Professor
University of Colorado

Sue Bael
Consultant, Portland, Oregon

Ronald F. Campbell
Emeritus Professor
The Ohio State University

George E. Dickson
Dean, College of Education
University of Toledo

Larry R. Goulet
Professor
University of Illinois

Chester W. Harris
Professor
University of California - Santa Barbara

William G. Katzenmeyer
Professor
Duke University

Barbara Thompson
Superintendent of Public Instruction
State of Wisconsin

Joanna Williams
Professor
Teachers College
Columbia University

University Advisory Committee

John R. Palmer, Chairman
Dean
School of Education

William R. Bush
Deputy Director
R & D Center

David E. Cronon
Dean
College of Letters and Science

Diane H. Eich
Specialist
R & D Center

Evelyn L. Hoekenga
Coordinator
R & D Center

Dale D. Johnson
Associate Professor
Curriculum and Instruction

Herbert J. Klausmeier
Member of the Associated Faculty
R & D Center

James N. Lipham
Member of the Associated Faculty
R & D Center

Wayne R. Otto
Associate Director
R & D Center

Richard A. Rossmiller
Director
R & D Center

Elizabeth J. Simpson
Dean
School of Family Resources
and Consumer Sciences

Lee Van Ess
Associate Vice Chancellor
University of Wisconsin - Madison

Associated Faculty

Vernon L. Allen
Professor
Psychology

B. Dean Bowles
Professor
Educational Administration

Thomas P. Carpenter
Assistant Professor
Curriculum and Instruction

Marvin J. Fruth
Professor
Educational Administration

John G. Harvey
Professor
Mathematics
Curriculum and Instruction

Frank H. Hooper
Professor
Child Development

Herbert J. Klausmeier
V.A.C. Henmon Professor
Educational Psychology

Joseph T. Lawton
Assistant Professor
Educational Psychology

Joel R. Levin
Professor
Educational Psychology

L. Joseph Linn
Professor
Institutional Studies

James N. Lipham
Professor
Educational Administration

Donald N. McIsaac
Professor
Educational Administration

Gerald Nadler
Professor
Industrial Engineering

Wayne R. Otto
Professor
Curriculum and Instruction

Robert G. Petzold
Professor
Music
Curriculum and Instruction

Thomas S. Popkewitz
Assistant Professor
Curriculum and Instruction

Thomas A. Romberg
Professor
Curriculum and Instruction

Richard A. Rossmiller
Professor
Educational Administration

Dennis W. Spuck
Assistant Professor
Educational Administration

Michael J. Subkoviak
Assistant Professor
Educational Psychology

Richard L. Venezky
Professor
Computer Sciences

J. Fred Weaver
Professor
Curriculum and Instruction

Larry M. Wilder
Assistant Professor
Child Development